

ONE STOP SOLUTION FOR WIRES AND CABLES



Toll Free No: 1800 410 0000

www.kei-ind.com      /keicables

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Corporate Information

Board of Directors

Mr. Anil Gupta - Chairman-Cum-Managing Director
Mrs. Archana Gupta - Director
Mr. Akshit Diviaj Gupta - Whole-Time Director
Mr. Pawan Bholusaria - Director
Mr. K.G. Somani - Director
Mr. Vijay Bhushan - Director
Mr. Vikram Bhartia - Director
Mr. Rajeev Gupta - Executive Director (Finance) & CFO
Mr. Sadhu Ram Bansal - Director
Mrs. Shalini Gupta - Director
Dr. Rajesh Kumar Yaduvanshi - Director
Mr. Vinay Mittal - Additional Director

Bankers

Bank of Baroda
State Bank of India
Punjab National Bank
Union Bank of India
Axis Bank Limited
ICICI Bank Limited
INDUSIND Bank Limited
IDFC First Bank Limited
RBL Bank Limited
HDFC Bank Limited
DCB Bank Limited
IDBI Bank Limited
Kotak Mahindra Bank Limited
Bank of Bahrain & Kuwait B.S.C
DBS Bank Limited
YES Bank Limited

Year of Establishment

1968

Type of Company

PUBLIC LIMITED

Income Tax (PAN) No.

AAACK0251C

CIN No: L74899DL1992PLC051527

PF Regd. No:

Delhi	DL-2330
Bhiwadi	RJ/8348 Dt.26.12.1996
Silvassa	GJ/VAPI/45769 Dt.9.11.2001
Chopanki	RJ/19828 Dt. 12/09/2008
Pathredi	RJRAJ1737691000

Factory Regd. No.

Bhiwadi	RJ/22219
Silvassa	GJ/1472
Chopanki	RJ/28507
Pathredi	RJ 32222

GSTIN. No.

Jammu and Kashmir	- 01AAACK0251C1ZL
Himachal Pradesh	- 02AAACK0251C1ZJ
Punjab	- 03AAACK0251C1ZH
Uttarakhand	- 05AAACK0251C1ZD
Uttar Pradesh	- 09AAACK0251C1Z5
Bihar	- 10AAACK0251C1ZM
Assam	- 18AAACK0251C1Z6
West Bengal	- 19AAACK0251C1Z4
Jharkhand	- 20AAACK0251C1ZL
Odisha	- 21AAACK0251C1ZJ
Madhya Pradesh	- 23AAACK0251C1ZF
Gujarat	- 24AAACK0251C1ZD
Kerala	- 32AAACK0251C1ZG
Pondicherry	- 34AAACK0251C1ZC
Telangana	- 36AAACK0251C1Z8
Rajasthan	- 08AAACK0251C1Z7
Dadra and Nagar Haveli	- 26AAACK0251C1Z9
Maharashtra	- 27AAACK0251C1Z7
Karnataka	- 29AAACK0251C1Z3

Factory Area

Bhiwadi	52447 sq. mtrs. [Covered]
Silvassa	14595 sq. mtrs. [Covered]
Chopanki	19188 sq. mtrs. [Covered]
Pathredi	31082 Sq. mtrs. [Covered]
Total Built-up area	102260 sq. mtrs.

Organization Strength Total Nos. 6128

Managerial	700
Supervisory	1822
Workmen	3606



KEI at a Glance

Business

Established with the vision of changing the landscape of the electrical cable & wire industry in India, KEI has been a leader in the cables and wires industry for over 50 years. With a sharp focus on quality and service, the Company has been a frontrunner in adopting latest business practices and innovations in technology to deliver maximum value to its customers. Over the years, KEI has carved a niche for itself in the market. Its superior quality and service resonates the trust that its customers have placed in the Company. Backed by state-of-the-art technology and infrastructure, KEI, today, has a vast product portfolio ranging EHV (upto 400 kV), HT, LT and specialized Power, Control and Instrumentation cables along with vast range of Rubber Cables.

History

Established in 1968 as a partnership firm under the name Krishna Electrical Industries, with the prime focus of manufacturing cables for the Department of Telecommunications (DoT), the firm was later converted into a public limited company under the abbreviated trade name KEI Industries Limited. In the following years, KEI acquired Matchless Status as a company engaged in the manufacture of stainless steel wires and other electrical wires and cables. In 2010 KEI set foot into the manufacturing of EHV cables (up to 220 kV) in collaboration with Brugg Cables, a century old Swiss company. Since then, KEI has continuously received the Superbrand Award for Industry and Consumer Validation, each year. Also, KEI has been continuously rated for good corporate governance by CARE, since 2007.

Verticals & Clientele

KEI supplies a range of cables to a number of industries such as power, petrochemical, cement, steel, infrastructure telecommunication and fertilizer industries, among others. KEI is a registered vendor for both Indian and overseas EPC contractors like ABB, Siemens, BHEL, Areva, Alstom and McDermott to name a few and is registered as a vendor for more than 200 large Indian companies encompassing almost all industrial sectors.

Services

In addition to electrical cable and wire manufacturing, KEI has diversified its operations and now has a fully established EPC Division to execute turnkey projects for various utilities. KEI offers a comprehensive range of services, including engineering, consultancy and project management, ranging from conceptualising to commissioning for core sectors like Power (including renewable energy), Railways, Refineries, Petrochemicals, Mining, Cement, Steel, etc. It provides end-to-end customer solutions from engineering to designing, supply and installation of products.

Manufacturing

KEI has created a large infrastructure by strategically locating its three manufacturing units over a built-up area of 102260 sq. mtrs. presently however further expansion plans are in pipeline. KEI has four manufacturing units located at Bhiwadi, Chopanki, Pathredi and Silvassa. The current capacity stands at 48,00,000 kg per annum for stainless steel wire division, 10,500 km per annum for HT cables, 35,000 km per annum for LT power cables, 31,000 km per annum for control cables, 11,000 km per annum for instrumentation cables, 10,000 km per annum for rubber cable and 5,50,000 km per annum for house wires/flexible wires. To meet the increased demand for its products emanating from the power, industrial, infrastructure and housing and construction sectors, the company has planned a capacity expansion program for all of its products.



Exports

The company enjoys a presence across almost over 60 countries: UAE, Oman, Kuwait, Bahrain, Qatar, Saudi Arabia, Yemen, Iraq, Syria, Jordan, Algeria, Eritrea, Sudan, Kenya, South Korea, Philippines, Japan, China, Turkmenistan, Kazakhstan, Spain, Germany, Italy, Congo, Bangladesh, Sri Lanka, Nepal, Myanmar, Uganda, Tanzania, Mozambique, Rwanda, South Africa, Zambia, Namibia, Nigeria, Ghana, Togo, South Sudan, Mali, DR Congo, Somalia, Trinidad and Tobago, Grenada, Jamaica, France, Mauritius, Australia, Singapore, PNG (Papua New Guinea), Vietnam, Indonesia, Malaysia, Canada, Cyprus, Ethiopia, Iran, Mexico, New Zealand, Switzerland, UK, USA, West Indies. . The company drives almost 20% of its revenue from the overseas market.

Financial Performance of the Company

Particulars	FY 23-24		FY 22-23		FY 21-22*	
	(INR in Millions)	(\$ in Millions)	(INR in Millions)	(\$ in Millions)	(INR in Millions)	(\$ in Millions)
sale & other Income	81,530.96	977.59	69,399.54	834.43	57,418.76	757.60
Profit before interest, Depreciation & Tax	8,865.53	106.30	7,338.33	88.23	6,035.79	79.64
Less- Financial Charges	439.10	5.26	347.06	4.17	403.93	5.33
Depreciation	613.55	7.36	570.79	6.86	554.54	7.32
Profit before	7812.88	93.68	6420.48	77.20	5077.32	66.99
Provision for tax	2,002.35	24.01	1,646.65	19.80	1,315.13	17.35
Profit after tax	5,810.53	69.67	4,773.83	57.40	3,762.19	49.64

Note: The dollar rate considered for conversion is FY 23-24 \$1 = NIR 83.40, FY 22-23 \$1 = NIR 82.17 & FY 21-22 \$1 = INR 75.79

* Previous Year figures have been regrouped / rearranged, wherever necessary

KEI Product Range

KEI has been a pioneer in design and manufacture of high-performance cables and wires. Its vast portfolio ,apart from EHV cables up to 400 kV. MV (medium voltage) and HT cables also includes control and instrumentation cables, rubber cables, thermocouple cables, zero halogen cables, braided cables, single and multi core flexible cables, housewire and stainless steel wires. By actively responding to changing customer demands and expectations, the company has expanded its distribution network and strengthened existing industrial product vertical.

Product & Solutions

- EHV Cables up to 400 kV
- HT Cables up to 33 kV- Dry Cured Process
- LT Power Cables-Copper / Aluminium Conductor PVC, XLPE & EPR
- LT Control Cables-Copper PVC, XLPE & EPR
- Screened / Unscreened Type PVC/PE/EPR/XLPE Instrumentation Cables
- Flexible & Housewires (Single & Multicore)
- Elastomeric (Rubber) Cables
- Railway Signaling Cables
- Fire Survival, Zero Halogen Cables
- Telephone Cables
- Automation Cables
- Welding Cables
- Submersible Cables / Winding Cables
- Ship Wiring Cable
- Mining Cable
- Cables for Offshore Installation
- Cables for Defence
- AB Cables
- Solar Cables
- EV Cables
- Medium Voltage Cover Conductor Cables

ISO CERTIFICATES





MANAGEMENT SYSTEM CERTIFICATE

Certificate no.:
C708236

Initial certification date:
30 June 2011

Valid:
08 November 2023 – 29 June 2026

This is to certify that the management system of

KEI Industries Limited

SP 919, 920, 922, RIICO Industrial Area, Phase- III, Bhiwadi, District: Alwar - 301019,
Rajasthan, India

and the sites as mentioned in the appendix accompanying this certificate

has been found to conform to the Environmental Management System standard:

ISO 14001:2015

This certificate is valid for the following scope:

Design, development, manufacture, marketing and services of cables, wires & conductors (HT/EHV/LT, power, control, instrumentation), thermocouples, elastomeric cables, winding & flexible wires and stainless steel wires for wide range of applications

Place and date:
Barendrecht, 02 July 2024

For the issuing office:
DNV - Business Assurance
Zwolsseweg 1, 2994 LB Barendrecht,
Netherlands



Eerie Koek
Management Representative

Lack of fulfillment of conditions as set out in the Certification Agreement may render this Certificate invalid.

ACCREDITED UNIT: DNV Business Assurance B.V., Zwolsseweg 1, 2994 LB, Barendrecht, Netherlands - TEL: +31(0)102922689, www.dnv.com/assurance



MANAGEMENT SYSTEM CERTIFICATE

Certificate no.:
C706235

Initial certification date:
30 June 2011

Valid:
08 November 2023 – 29 June 2026

This is to certify that the management system of

KEI Industries Limited

SP 919, 920, 922, RIICO Industrial Area, Phase- III, Bhiwadi, District: Alwar - 301019,
Rajasthan, India

and the sites as mentioned in the appendix accompanying this certificate

has been found to conform to the Occupational Health and Safety Management System standard:

ISO 45001:2018

This certificate is valid for the following scope:

Design, development, manufacture, marketing and services of cables, wires & conductors (HT/EHV/LT, power, control, instrumentation), thermocouples, elastomeric cables, winding & flexible wires and stainless-steel wires for wide range of applications

Place and date:
Barendrecht, 02 July 2024

For the issuing office:
DNV - Business Assurance
Zwolsseweg 1, 2994 LB Barendrecht,
Netherlands



Erie Koek
Management Representative

Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.

ACCREDITED UNIT: DNV Business Assurance B.V., Zwolsseweg 1, 2994 LB, Barendrecht, Netherlands - TEL: +31(0)102922689. www.dnv.com/assurance



MANAGEMENT SYSTEM CERTIFICATE

Certificate no.:
C706237

Initial certification date:
12 December 2000

Valid:
08 November 2023 – 29 June 2026

This is to certify that the management system of

KEI Industries Limited

SP 919, 920, 922, RIICO Industrial Area, Phase- III, Bhiwadi, District: Alwar - 301019,
Rajasthan, India

and the sites as mentioned in the appendix accompanying this certificate

has been found to conform to the Quality Management System standard:

ISO 9001:2015

This certificate is valid for the following scope:

Design, development, manufacture, marketing and services of cables, wires & conductors (HT/EHV/LT, power, control, instrumentation), thermocouples, elastomeric cables, winding & flexible wires and stainless-steel wires for wide range of applications

Place and date:
Barendrecht, 02 July 2024

For the issuing office:
DNV - Business Assurance
Zwolsseweg 1, 2994 LB Barendrecht,
Netherlands



Erie Koek
Management Representative

Lack of fulfilment of conditions as set out in the Certification Agreement may render this Certificate invalid.

ACCREDITED UNIT: DNV Business Assurance B.V., Zwolsseweg 1, 2994 LB, Barendrecht, Netherlands - TEL: +31(0)102922689. www.dnv.com/assurance

Zertifikat

Certificate



Zertifikat Nr. *Certificate No.*
R 60128460

Blatt *Sheet*
0001

Ihr Zeichen *Client Reference*

Unser Zeichen *Our Reference*

Ausstellungsdatum

Date of Issue

0001--19600237 001

05.04.2018

(day/mo/yr)

Genehmigungsinhaber *License Holder*

KEI INDUSTRIES LIMITED
SP- 919,920&922, PHASE-III,
RIICO INDUSTRIAL AREA,
BHIWADI, ALWAR, RAJASTHAN, 301019
India

Fertigungsstätte *Manufacturing Plant*

KEI INDUSTRIES LIMITED
SP- 919,920&922, PHASE-III,
RIICO INDUSTRIAL AREA,
BHIWADI, ALWAR, RAJASTHAN, 301019
India

Prüfzeichen *Test Mark*



Type Approved
Safety
Regular Production
Surveillance

www.tuv.com
ID 1111215408

Geprüft nach *Tested acc. to*

EN 50618:2014

Zertifiziertes Produkt (Geräteidentifikation)

Certified Product (Product Identification)

Lizenzentgelte - Einheit

License Fee - Unit

Cable (Electric Cables for Photovoltaic Systems)

Code designation: H1Z2Z2-K

25

Cross section: 1,5mm² to 240mm² acc. to
IEC 60228:2004 Table 3

Trade mark: KEI

Rated Voltage: AC 1.0/1.0 kV; DC 1,5 kV
Conductor conductor, Conductor earth

Ambient temperature: -40°C to +90°C

Max. Conductor temp.: +120°C

Material of insulation: Halogen -free Silane cross-
linkable compound

Material of sheath: Halogen -free Silane cross-
linkable compound

Color of insulation: Black

Color of sheath: Black

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde und es bestätigt die Konformität des Produktes mit den oben genannten Standards und Prüfgrundlagen. Zusätzliche Anforderungen in Ländern, in denen das Produkt in Verkehr gebracht werden soll, müssen zusätzlich betrachtet werden. Die Herstellung des zertifizierten Produktes wird überwacht.

This certificate is based on our Testing and Certification Regulation and states the conformity of the product with the standards and testing requirements as indicated above. Any additional requirements in countries where the product is going to be marketed have to be considered additionally. The manufacturing of the certified product is subject to surveillance.

TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg

Tel.: +49 221 806-1371 e-mail: cert-validity@de.tuv.com

Fax: +49 221 806-3935 http://www.tuv.com/safety



CERTIFICATE OF COMPLIANCE

Certificate Number E510985
Report Reference E510985-20200831
Issue Date 2020-SEPTEMBER-02

Issued to: KEI Industries Limited
D-90, Okhla Industrial Area
Phase – 1
New Delhi Delhi 110020 INDIA

**This certificate confirms that
representative samples of**

MEDIUM-VOLTAGE POWER CABLE
Types MV-90 Cable, wet or dry locations, rated 5 to 35 kV

Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety:
Additional Information:

UL 1072 - Medium-Voltage Power Cables
See the UL Online Certifications Directory at
<https://iq.ulprospector.com> for additional information.

This *Certificate of Compliance* does not provide authorization to apply the UL Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program
UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at <http://ul.com/aboutul/locations/>



CERTIFICATE OF COMPLIANCE

Certificate Number E510985
Report Reference E510985-20210128
Issue Date 2021-MARCH-08

Issued to: KEI Industries Limited
D-90, Okhla Industrial Area
Phase - 1
New Delhi Delhi, 110020 IN

**This certificate confirms that
representative samples of** MEDIUM-VOLTAGE POWER CABLE
See Addendum Page For Models

Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 1072, Medium-Voltage Power Cables
Additional Information: See the UL Online Certifications Directory at
<https://iq.ulprospector.com> for additional information.

This *Certificate of Compliance* does not provide authorization to apply the UL Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program
UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at <http://ul.com/aboutul/locations/>





National Accreditation Board for
Testing and Calibration Laboratories

CERTIFICATE OF ACCREDITATION

**QUALITY ASSURANCE LABORATORY, KEI INDUSTRIES
LTD**

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

**"General Requirements for the Competence of Testing &
Calibration Laboratories"**

for its facilities at

99/2/7, MADHUBAN INDUSTRIAL ESTATE, RAKHOLI, SILVASSA, DADRA AND NAGAR HAVELI, INDIA

in the field of

TESTING

Certificate Number: TC-8412

Issue Date: 16/04/2023

Valid Until:

15/04/2025

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Identity : KEI INDUSTRIES LTD.

Signed for and on behalf of NABL



N. Venkateswaran
Chief Executive Officer



National Accreditation Board for
Testing and Calibration Laboratories

CERTIFICATE OF ACCREDITATION

**QUALITY ASSURANCE LABORATORY - EHV, KEI
INDUSTRIES LIMITED**

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

**"General Requirements for the Competence of Testing &
Calibration Laboratories"**

for its facilities at

A-280/281/282/283/284, RIICO INDUSTRIAL AREA, CHOPANKI, BHIWADI, ALWAR, RAJASTHAN, INDIA

in the field of

TESTING

Certificate Number: TC-15068

Issue Date: 10/12/2024

Valid Until: 09/12/2028

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Entity: KEI Industries Limited

Signed for and on behalf of NABL



N. Venkateswaran
Chief Executive Officer



National Accreditation Board for
Testing and Calibration Laboratories

CERTIFICATE OF ACCREDITATION

**QUALITY ASSURANCE LABORATORY, KEI INDUSTRIES
LTD.**

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

**"General Requirements for the Competence of Testing &
Calibration Laboratories"**

for its facilities at

SP-919, 920, 922, RIICO INDUSTRIAL AREA, BHIWADI, ALWAR, RAJASTHAN, INDIA

in the field of

TESTING

Certificate Number: TC-6110

Issue Date: 31/07/2024

Valid Until: 30/07/2026

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Entity: KEI INDUSTRIES LTD.

Signed for and on behalf of NABL



N. Venkateswaran
Chief Executive Officer



American
Petroleum
Institute

REGISTRATION NO. Q1-4732

Certificate of Registration

The American Petroleum Institute certifies that the quality management system of

KEI INDUSTRIES LIMITED
SP- 919/920/922, Riico Industrial Area, Phase - III
Bhiwadi
India

has been assessed by the American Petroleum Institute and found to be in conformance with the following:

API Spec Q1, 9th Edition

The scope of this registration and the approved quality management system applies to the

Manufacture and Supply of Electric Cables for the Oil and Gas Industry

API approves the organization's justification for excluding
Design and Development; Servicing; Customer Property



Effective Date: OCTOBER 20, 2022
Expiration Date: OCTOBER 20, 2025
Registered Since: OCTOBER 20, 2022

Anchal Liddar

Senior Vice President of Global Industry Services

This certificate is valid for the period specified herein. The registered organization must continually meet all requirements of API Spec Q1, *Specification for Quality Management System Requirements for Manufacturing Organizations for the Petroleum and Natural Gas Industry*, and the requirements of the Registration Agreement. Registration is maintained and regularly monitored through annual full system audits. This certificate has been issued from API offices located at 200 Massachusetts Avenue, NW Suite 1100, Washington, DC 20001-5571, U.S.A. It is the property of API and must be returned upon request. To verify the authenticity of this certificate, go to www.api.org/compositelist.

®

2021-164 | 11.21 | Digital

LPCB®

www.redbooklive.com

Certificate of Product Approval

Certificate Number: 1741a

Issue: 01

KEI Industries Ltd

SP:919, 920 & 922

Riico Industrial Area, Phase III, Bhiwadi,

District: Alwar - 301019

Rajasthan, India

is authorised to use the LPCB mark in association with the product(s) listed in this certificate and appendix having complied with the requirements of the standard(s) detailed below:

Product(s)

Cable Types as listed below:
KEI ELECTRIC CABLE

Standard(s) (see Appendix for details)

BS 7846:2015 Cat F2
IEC 60331-21:1999

Select relevant text, type new text or hit spacebar.



Signed for BRE Global Ltd.

Obada Piracha

Certification Manager

4 October 2023

Date of Issue

4 October 2023

Date of First issue



This certificate and appendix remain the property of BRE Global Ltd and is issued subject to terms and conditions (for details visit www.redbooklive.com/terms).

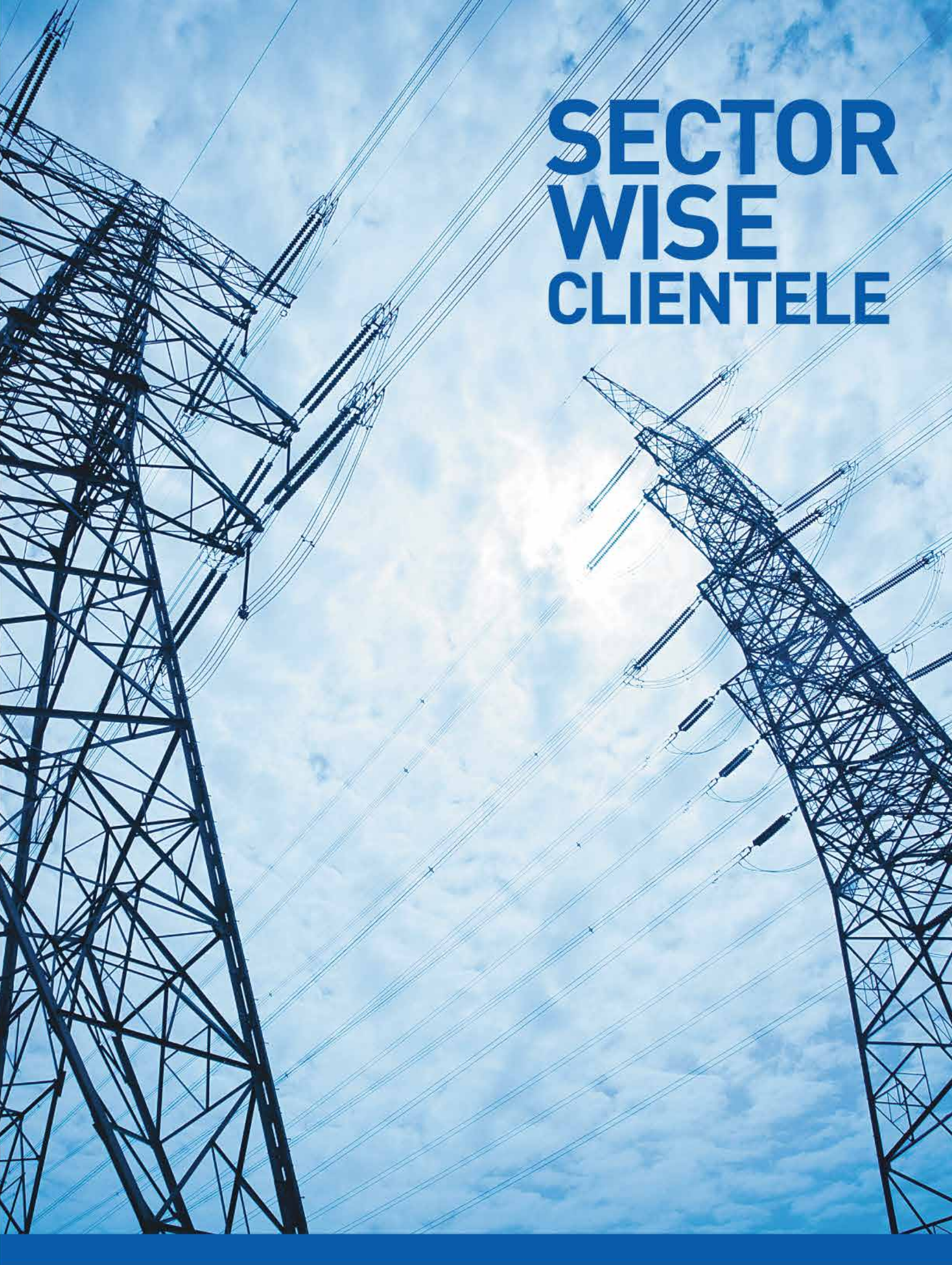
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BRE Global Ltd, Garston, Watford, WD25 9XX
T: +44 (0)333 321 8811 E: enquiries@breglobal.com

LPCB® is a registered trademark of the Building Research Establishment Ltd.



bre

A low-angle, upward-looking photograph of several high-voltage electrical transmission towers and their associated power lines. The towers are constructed from dark metal lattice and are positioned on the left and right sides of the frame, with lines extending from them towards the center. The background is a bright blue sky filled with soft, white clouds. The overall composition conveys a sense of scale and industrial infrastructure.

SECTOR WISE CLIENTELE

SECTOR WISE CLIENTELE

SECTOR 1	INTERNATIONAL EPC'S	COUNTRY
	ABB	INDIA
	AREVA	UAE, BANGLADESH
	SIEMENS	BANGLADESH, INDIA, QATAR, SRI LANKA
	SAMSUNG	INDIA
	LG	INDIA
	TOYO	INDIA
	TECHNIP	INDIA
	PETROFAC	UAE, INDIA
	ALSTOM	INDIA, FRANCE, MALAYASIA, SWITZERLAND, SHARJAH
	McDERMOTT	UAE
	MITSUI	INDIA
	ITOCHU	INDIA
	SKANSKA	INDIA
	PUNJ LLYODS	SINGAPORE, MALAYASIA, INDIA, QATAR
	SKIPPER ELECTRICALS	NIGERIA
	BHEL	IRAQ, MALAYASIA, INDIA
	LARSEN & TOUBRO	SRI LANKA, INDIA, UAE, OMAN, KUWAIT
	RELIANCE GROUP	INDIA
	DELHI METRO RAIL CORPORATION	INDIA
	IRCON	ETHIOPIA, INDIA
	STERLING & WILLSON	AFGANISTAN, INDIA
	ETA	SUDAN
	TECHNIMONT ICB PVT LTD.	UAE
SECTOR 2	POWER AND TRANSMISSION	
	SUZLON ENERGY LIMITED	INDIA
	ENERCON	INDIA
	TATA POWER	INDIA
	ESSAR POWER	INDIA
	NATIONAL THERMAL POWER CORPORATION	INDIA
	JINDAL POWER	INDIA
	CEB, MAURITIUS	MAURITIUS
	POWER GRID CORPORATION OF INDIA	INDIA
	ENRON	INDIA
	BSES LTD	INDIA
	NUCLEAR POWER CORPORATION	INDIA
	INDIAN RAILWAYS	INDIA
	AHMEDABAD ELECTRICITY CO	INDIA
	SURAT ELECTRICITY CO	INDIA
	KARNATAKA POWER CO LTD	INDIA
	STATE ELECTRICITY BOARDS OF INDIA	INDIA
	Reliance	INDIA
	CESC	INDIA
	NHPC	INDIA
	FEDERAL ELECTRICITY & WATER AUTHORITY	UAE
	KAHRAMAA	QATAR
	SAUDI ELECTRICITY COMPANY	SAUDI ARABIA
	MEW	KUWAIT
	PEC	YEMEN
	EDD	BAHRAIN
	SIEMENS GAMESA Renewable Power Pvt Ltd	INDIA / TAMILNADU
	Vestas Wind Technology India Pvt.Ltd	INDIA
	Tamilnadu Transmission Corporation Limited	INDIA / TAMILNADU

SECTOR WISE CLIENTELE

SECTOR 1	INTERNATIONAL EPC'S	COUNTRY
	STEEL AUTHORITY OF INDIA	INDIA
	ESSAR	INDIA
	TATA	INDIA
	NALCO	INDIA
	BALCO	INDIA
	HINDALCO	INDIA
	HIDUSTAN ZINC LIMITED	INDIA
	BIRLA COPPER	INDIA
	INDAL	INDIA
	MONNET STEEL	INDIA
	JINDAL VIJAYNAGAR	INDIA
	JINDAL STEEL & POWER	INDIA
	ISPAT	INDIA
SECTOR 4	REFINERIES AND PETROCHEMICALS	
	INDIAN OIL CORPORATION LTD	INDIA
	BHARAT PETROLEUM CORPORATION LTD	INDIA
	INDIAN PETROCHEMICALS LTD	INDIA
	KOCHI REFINERIES LTD	INDIA
	CPCL	INDIA
	ESSAR	INDIA
	HINDUSTAN PETROLEUM CORPORATION LTD	INDIA
	NUMALIGARH REFINERIES LTD	INDIA
	BONGAIGAON REFINERIES LTD	INDIA
	HALDIA PETROCHEMICALS LTD	INDIA
	RELIANCE	INDIA
	CAIRN ENERGY	INDIA
	BORL	INDIA
	MITTAL (HPCL)	INDIA
	TAKREER	UAE
	KNPC	KUWAIT
	PDO	OMAN
	QP	QATAR
SECTOR 5	OIL AND GAS	
	OIL & NATURAL GAS CORPORATION LTD	INDIA
	GAS AUTHORITY OF INDIA LTD	INDIA
	OIL INDIA LTD	INDIA
	INDIAN OIL TANKING	INDIA
	GASCO	UAE
SECTOR 6	TELECOMMUNICATION	
	BHARAT SANCHAR NIGAM LTD	INDIA
	CYPRUS TELECOM	CYPRUS
	BASIC OPERATORS AND ENGINEERS	INDIA
	DEFENCE	INDIA
	RELIANCE INFOCOMM	INDIA
	AIRTEL	INDIA
	RELIANCE COMMUNICATION	INDIA
	VODAFONE	INDIA
	NXTRA DATA CENTRE	INDIA/MAHARASTHRA
	India International Convention & Expo Centre	INDIA / DELHI

SECTOR WISE CLIENTELE

SECTOR 7	FERTILISERS	COUNTRY
	NATIONAL FERTILISERS LTD	INDIA
	INDIAN FARMERS AND FERTILISERS CO-OPERATIVE LTD	INDIA
	KRISHAK BHARTI CO-OPERATIVE LTD	INDIA
	CHAMBAL FERTILISERS	INDIA
	ZUARI AGRO	INDIA
	RASHTRIYA CHEMICALS AND FERTILISERS	INDIA
	TATA CHEMICALS	INDIA
	HINDUSTHAN FERTILISERS CO LTD	INDIA
	GUJARAT STATE FERTILIZER CORPORATION	INDIA
	DEEPAK FERTILIZER	INDIA
SECTOR 8	CEMENT	
	ACC LTD	INDIA
	LARSEN & TOUBRO	INDIA
	J. P. BELA CEMENT	INDIA
	TATA CEMENT	INDIA
	RAJ CEMENT	INDIA
	TCIL - TORO	UGANDA
	GUJARAT AMBUJA CEMENTS LTD.	INDIA
	ARM	KENYA
	RAS CEMENT	INDIA
	NIGERIA CEMENT	NIGERIA
	STAR CEMENT	UAE
	JEBEL ALI CEMENT	UAE
SECTOR 9	SOFTWARE PARKS / PHARMACEUTICALS / HOSPITALS / MULTIPLEX / BANKS / HOTELS / PAINTS / CHEMICALS / OTHERS	COUNTRY
	INFOSYS SOFTWARE	INDIA
	3 GLOBLE SERVICES	INDIA
	DELL COMPUTERS	INDIA
	WIPRO SOFTWARE	INDIA
	IBM COMPUTERS	INDIA
	SURYA IT PARK	INDIA
	INTEL COMPUTERS	INDIA
	VERITAS SOFTWARE	INDIA
	INTERNATIONAL KNOWLEDGE PARK	INDIA
	RANBAXY	INDIA
	CIPLA	INDIA
	RATIO PHARMA	INDIA
	BANNER PHARMA	INDIA
	MADRAS PHARMA	INDIA
	LOREAL COSMETICS	INDIA
	MAHAVEER HOSPITAL	INDIA
	WOCKHARD HOSPITALS	INDIA
	PVR MULTIPLEX	INDIA

SECTOR WISE CLIENTELE

INOX MULTIPLEX	INDIA
ICICI BANK	INDIA
HSBC BANK	INDIA
DUETSCHKE BANK	INDIA
HDFC BANK	INDIA
ABN - AMBRO BANK	INDIA
CITY BANK	INDIA
COUNTRYWIDE FINANCIAL CORPORATION	INDIA
CAP GEMINI INDIA	INDIA
ITC	INDIA
HOTEL TAJ	INDIA
GOODLAS NEROLAC	INDIA
ASIAN PAINTS	INDIA
ACCENTURE - GODREJ	INDIA
JET AIRWAYS	INDIA
SAHARA	INDIA
MONSANTO	INDIA
MIND SPACE - HOUSING COMPLEX	INDIA
BIOCON	INDIA
TATA CONSULTANCY SERVICES	INDIA
KALA ACADEMY	INDIA
BALAKRISHNA TYRES	INDIA
GODFREY PHILIPS	INDIA
GLOBAL OILS & FATS	INDIA

Performance and Approval Certificates



CERTIFICATION

TO WHOM SOEVER IT MAY CONCERN

This is to advise that we, M/s Brugg Kabel AG, Switzerland have signed a technical collaboration agreement for design, manufacture, testing of XLPE insulated cables 66KV / 110KV / 132KV / 220KV with M/s KEI Industries Ltd. D-90, Okhla Industrial Area, Phase-I, New Delhi 110020 with manufacturing units located at Bhiwadi Unit, SP-919/920, RIICO Industrial Area, Phase-III, Bhiwadi, Dist. Alwar 301019, Rajasthan & Chopanki Unit, Plot-A 280/281/282, Chopanki, Dist. Alwar, Rajasthan 301019.

By virtue of this agreement, the complete manufacturing of High Voltage / Extra High Voltage cables covering voltage grades 66KV / 110 KV / 132KV / 154KV / 220KV shall be done as per Brugg's design and manufacturing systems and the product quality shall meet the required standards as per IEC 60840 / IS7098-III/ IEC 62067 as applicable. M/s. KEI Industries Ltd shall manufacture the above voltage class of cables under Licence from M/s. BRUGG KABEL AG, Switzerland.

BRUGG KABEL AG's selected Type of Raw materials, designs of products, production procedures, Routine testing, Type testing and Prequalification testing etc. shall be adopted by M/s KEI Industries Ltd. manufacturing plants in India under supervision of BRUGG KABEL AG.

BRUGG KABEL AG will assist M/s KEI Industries Ltd. for preparation and execution of the Tests according to above stated standards.

For HV cable systems project of above voltage categories executed under this agreement, Brugg Kabel AG is prepared to assure back up support for successful operation for offered cable and accessories.


Markus Burger
CEO


Herbert Nyffenegger
Vice Director / Business Development



CH-5201 Brugg, Switzerland February 19th, 2010

Brugg Kabel AG, Kleinarmgasse 28 - CH-5201 Brugg - Telefon +41 (0)56 460 33 33 Fax +41 (0)56 460 35 36 E-Mail info@brugg.com
www.brugg.com Ein Unternehmen der Gruppe BRUGG

Headquarters
Chief Engineer
Pathankot Zone
Pathankot - 145001

27058/XXXVI/ 77 /E2(D)

11 Jun 2015

HQ CWE Pathankot

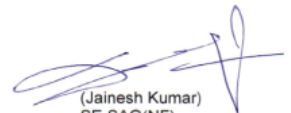
CWE Mamun

CWE Yol

CWE Jammu

M/s KEI Industries Ltd i.e. KEI Brand HT cable upto & incl 33 KVA.LT & Control Cables

1. A photocopy of E-2 Wks (Des) Sub Dte of Works Engineer-in-Chief's Branch Integrated HQ of MoD (Army) Kashmir House, Rajaji Marg, New Delhi-110 011 letter No. 43285/CMPT/447/ Des-2 dated 30 Jun 2014 is fwd herewith for your further necessary action pl.


(Jainesh Kumar)
SE, SAG(NF)
Dir(Design & Plg)
For Chief Engineer

Encls: (As above)

Internal:-

E-8 Sec

E-4 Sec

for info

STEEL AUTHORITY OF INDIA LIMITED
ROURKELA STEEL PLANT, ROURKELA
MATERIALS MANAGEMENT - PIVD

Vendor Registration Certificate

REF.NO. MM/REGN/ 4598/15495/ 882. DATED : 04-AUG-10
M/s. KEI INDUSTRIES LTD.
1ST FLOOR
33, DR. SUNDARI MOHAN AVENUE
NEAR PARK CIRCUS LADIES PARK
KOLKATA-700014

We have pleasure to register you as an approved vendor of RSP for the item(s) listed below :

SL.NO	DESCRIPTION	PRODUCT CODE
1	PVC INSULATED & SHEATHED LT POWER CABLE	325/001/04
2	PVC INSULATE ARMoured/UNARMoured LT CABLES.	325/001/38
3	WELDING CABLE	325/001/35
4	CONTROL CABLE	325/002/01
5	INSTRUMENTATION CABLE	325/002/02
6	ELASTOMER INSULATING FLEXIBLE CABLE 110KV	325/045/01

REGN. NO	VALIDITY	SUPPLIER CODE	STATUS OF FIRM	CATEGORY
MM/REGN/004598/MO	02-AUG-15	66211/01	PRIVATE	

- Note : i) We may not necessarily send all our enquiries for these category of items as and when we are in the market. This registration does not guarantee award of contracts.
ii) We reserve the right to demand from you such securities as may be necessary as an earnest of your fulfilling contracts / supply orders which we may award you.
iii) We may eliminate your name from our panel without assigning any reason.
iv) It may be your responsibility to apply for renewal of regn. on payment of stipulated renewal fee and production of requisite documents 90 days in advance before expiry of registration period to keep your name in the register of approved suppliers.
v) For Traders/Dealers the validity of the certificate is maximum for 3 Yrs, subject to submission of valid dealership certificate every year to PIVD section


Head of PIVD
RSP/SAIL/ROURKELA
(S. S. DAS)
AGM (MM) PIVD
SAIL, R.S.P. Rourkela



08-1044

TYPE TEST CERTIFICATE OF COMPLETE TYPE TEST

OBJECT Three-core power cable

TYPE 18/30 KV 3CX400SQMM CU/XLPE/ISWA/PVC

Rated voltage, (U _n /U _m)	18/30/36 KV	Conductor material	Cu
Conductor cross-section	3x400 mm ²	Insulation material	XLPE

MANUFACTURER KEI Industries Limited
New Delhi, India

CLIENT KEI Industries Limited
New Delhi, India

TESTED BY KEMA HIGH-VOLTAGE LABORATORY
Arnhem, the Netherlands

DATE(S) OF TESTS 17 December 2007 until 18 July 2008

The object, constructed in accordance with the description, drawings and photographs incorporated in this Certificate, has been subjected to the series of proving tests in accordance with

IEC 60502-2

This Type Test Certificate has been issued by KEMA following exclusively the STL Guides.

The results are shown in the record of Proving Tests and the oscillograms attached hereto. The values obtained and the general performance are considered to comply with the above Standard and to justify the ratings assigned by the manufacturer as listed on page 4.

The Certificate applies only to the object tested. The responsibility for conformity of any object having the same designations with that tested rests with the Manufacturer.

This Certificate consists of 35 pages in total.

© Copyright: Only integral reproduction of this Certificate is permitted without written permission from KEMA. Electronic copies in e.g. PDF-format or scanned version of this Certificate may be available and have the status "for information only". The sealed and bound version of the Certificate is the only valid version.

KEMA Nederland B.V.


P. A. Bus
KEMA T&D Testing Services
Managing Director
Arnhem, 22 September 2008



HARYANA VIDYUT PRASARAN NIGAM LIMITED

(Regd. office: Sector-6 Shakti Bhawan, Panchkula)

Office Of the

093134-72674

HVPN Executive Engineer/Transmission System Division, HVPNL, Meh. Road, Gurgaon-122001

Date: 4th March 2011

To Whomsoever it may Concern

This is to certify that KEI Industries Limited, New Delhi has successfully supplied full quantity of 24.705 Kms. 66 KV (E). 1X1200 Sq.mm, Aluminum XLPE Cable against Purchase Order No. HDP-1776/REC-090/Xen/Project(S/Stn.) Date. 12.11.2010.

The Quality and service offered by KEI Industries Limited during Execution of above order is found good and satisfactory.

Executive Engineer,
TS Division HVPNL Gurgaon
Executive Engineer
T.S. Divn. HVPNL, Gurgaon



ಬೆಂಗಳೂರು ವಿದ್ಯುತ್ ಸರಬರಾಜು ಕಂಪನಿ ನಿಯಮಿತ
BANGALORE ELECTRICITY SUPPLY COMPANY LIMITED
(Wholly owned by Government of Karnataka Undertaking)

No: BESCOM/GM(T).BC-20/F-1059/06-07/CYS-109
Encl:

Corporate Office
K.R. Circle
Bangalore-560 001
Date: 28-09-06

OFFICIAL MEMORANDUM

Sub: Vendor approval for HT & LT UG Cable - Reg

Ref: 1) Technical Committee Meeting held on 14-9-06.
2) Firm's Ltr. dated 29/6/06

The firm namely M/s. KEI Industries Limited, Eniwadi SP-920, RiICO, Industrial Area phase III Bhiwadi, District Alwar Rajasthan-301019 have requested for vendor approval for the 11 KV HT XLPE / PVC UG cables and 1.1 KV LT UG cables of various sizes. The firm have produced CPRI type test certificates for the following sizes of cables

1. 3 C x 300 Sq.mm HT cable, 1.1 KV 3.5 x 300 Sq.mm & 600/1000 volts 3 x 240 Sq.mm XLPE HT LT Power Cables.

The test certificates have been verified and found to be generally in conformity with the IS. The factory is also inspected and is found to have all the necessary infrastructure for manufacturing cables and is having all the testing facilities to conduct routine and acceptance test as per IS.

Approval is therefore hereby accorded for M/s. KEI Industries Limited, as approved vendors to BESCOM for supply of both 11 KV HT UG cable and 1.1 KV LT UG Cable of various sizes for use in MS buildings, layouts etc. in BESCOM area. The validity of approval is upto Sept-2009. The prospective consumers who purchase the cables shall stand guarantee for the cables and it must be noted that normally the following sizes of cables are used in BESCOM.

-2-

- a) 11 KV HT UG cables of sizes 3 x 95, 3 x 240 & 3 x 400 Sq.mm
b) 1.1 KV LT UG cables of size 3 1/2 x 120 Sq.mm, 3 1/2 x 185 Sq.mm, 3 1/2 x 240 Sq.mm and 3 1/2 x 400 Sq.mm.

General Manager (Tech),
BESCOM

Copy to:-

The Chief General Managers (Elec), BMAZ/98A2/C7RAZ for information.
All General Managers, (C.O&M) Circles, BESCOM.
All Executive Engineers Elec., (C.O&M) Divisions, BESCOM.
M/s. KEI Industries Limited, Bhiwadi SP-920, RiICO, Industrial Area phase III Bhiwadi, District Alwar Rajasthan-301019

JAIPUR DEVELOPMENT AUTHORITY, JAIPUR

No.JDA/CE/Elect/2006/D- 884

Dated 22

OFFICE ORDER

In accordance with the powers confirmed of the undersigned as per schedule of powers of JDA Circle Engineer-I hereby order that in JDA BSR part A Electric Work for HT/LT lines works Item No. 4 & 7 "Providing and Laying underground 33KV. XLPE(HT) Cable" the Existing Printed Text "approved make ICC/NICCO/GLOSTAR ICC/TROPO-DOUR /TORRENT/POLYCAB" is to be Read/Printed as "Approved make ICC/NICCO/GLOSTAR/ICC/TROPODOUR/TORRENT/POLYCAB/KEI".

The above order is brought into the force with immediate effect in the jurisdiction of JDA.

Circle Engineer-I &
TA to Director(Engg.)
JDA, Jaipur

Copy to following for Information:-

1. Director (Engg.), JDA, Jaipur.
2. ACE-I/II/CE-II, JDA, Jaipur
3. ZE(Electrical)-I/II, JDA, Jaipur.
4. Guard File.

Circle Engineer-I &
TA to Director(Engg.)



ME

Micron Electricals

Govt. Licensed Class 1 Electrical Contractors & Engineers
Specialists in All Types of H.T. & L.T. Electrical Installations

K.S.T.: 70103148 C.S.T.: 70153140 Dated: 11-10-83

Phone : 080-41902800 (30 Lines)
080-23369776 / 785, 23315709
Fax : 080-23312487
E-mail : micronelec@dataone.in
micronelectricals@airtelbroadband.in
Website : www.micronelectricals.com

3RD FLOOR, 'SOUNDARYA PARAMOUNT'
No. 83, 5TH CROSS, MALLESWARAM CIRCLE
BANGALORE - 560 003

TIN : 2 9770084027 Licence No. 20 (Class 1)

REF. NO.: ME:2881:2006

DATE : 02/09/2006

M/s. KEI INDUSTRIES LIMITED,
101/102, Vastu Enclave
Andheri Pump House, Andheri (East)
MUMBAI - 400 093

TO WHOMSOEVER IT MAY CONCERN

This is to certify that the orders have been executed satisfactorily for the supply of 110 Mtrs. 3C x 240Sqmm 33kV (E) HT XLPE cable for our project of Laxmi Cybercity, Hyderabad and 1030 Mtrs. 3C x 400 Sqmm 11KV (E) HT XLPE Cable for Bagmane Tech Park, Bangalore project, vide your Invoice No. 821 dt. 30/06/2006 and Invoice No.900 dt. 10/07/2006.

For MICRON ELECTRICALS

S.K. Seetharamu
S.K. SEETHARAMU
MANAGING PARTNER



Date : 20.08.06

Subject: Approval of HT Cables upto 11 KV voltage level.

We have gone through the credentials alongwith (PR) test certificates subscribed to us for HT Cables and hence approved your KEI make HT Cables upto 11 KV voltage level for both E & UE types in our ongoing project at Muri site. This is just for your information.

Regards,

DEVEESH JHA
(DEVEESH JHA)
Manager-Project & Electrical

27058/XXXVI /E2(D)

HQ CWE Pathankot

CWE Mamun

CWE Yol

CWE Jammu

Headquarters
Chief Engineer
Pathankot Zone
Pathankot - 145001

11 Jun 2015

M/s KEI Industries Ltd i.e. KEI Brand HT cable upto & incl 33 KVA, LT & Control Cables

1. A photocopy of E-2 Wks (Des) Sub Dte of Works Engineer-in-Chief's Branch Integrated HQ of MoD (Army) Kashmir House, Rajaji Marg, New Delhi-110 011 letter No. 43285/CMPT/447/ Des-2 dated 30 Jun 2014 is fwd herewith for your further necessary action pl.

Encls: (As above)

Internal:-

E-8 Sec } for info
E-4 Sec }

Jainesh Kumar
(Jainesh Kumar)
SE,SAG(NF)
Dir(Design & Plg)
For Chief Engineer



Gujarat Narmada Valley Fertilizers Co. Ltd
(An ISO 14001 Company)

Regd. Office :
P.O. Naramadanagar-382 015,
Dist. Bharuch, Gujarat, India
Phone : (2642) 237471
Fax : (2642) 247122 / 247059
E-mail : nvratan@gnfc.in

Date : 18/07/2006

M/s KEI Industries Ltd.
101-102, Vastu Shilp, Vastu Enclave
Jijamata Road, Andheri Pump House
Andheri (E), Mumbai - 400 093

Knd Attention : Mr. Vijay kajbaje, Dy.Manager, Mktg.

Dear sir,

Sub : Confirmation of Registration of your firm in our list of approved vendors.

Registration of Items : 1.1 KV PVC/XLPE LT Power and Control Cables

With reference to above, we are pleased to inform that our Vendor Evaluation Committee consisting of Senior Executives of GNFC has examined the Profile of your organization and considering core strengths of the organization, GNFC management has approved to include your organization in the list of approved vendors for the above items.

As per GNFC Management's decision, all the enquiries of items having value above Rs. five lacs are being floated through e-Tendering only. Your above approval is subject to your creating necessary facilities / infrastructure like computer with internet, Digital Signature Certificate (DSC), etc for e-Tednering. For DSC and support for registration and filling e-Tender, etc. you may avail services of (n)Code Solution (A division of GNFC) Team as under or our LRA, M/s Amos Investments & Services, Ahmedabad (Mr. Samir Patel. Phone no : 079-64505050-1 2-3, e-mail : dsc@amosenterprise.com).

* Mr. Bhavin Patel - 9898589652 , * Mr. Kalpesh Sheth - 9898084419
* Mr. Rushil Bhatt - 9327084190, * Mr. Keyur Parekh - 9879279117
* Mr. Dwiren Kantharia - 9426007087

Your organization will receive enquiries for above items as and when needs arises for the same at our end.

Thanking you.

Yours faithfully,
For G.N.F.C. Ltd.

M N Tirmak

Project Site: Balesar Nagar, **KORBA** – 495 034, Chhattisgarh State
Tel: (07759) 241182, (07759) 241183; Fax: –91 (07759) 241184; E-mail: projects@balcoindia.com
Mumbai Office: 66 07, Jolly Maker-II, 225, Nariman Point, Mumbai – 400 021
Tel: (022) 22621562; Fax: –91 (022) 2264 2235; E-mail: projects@balcoindia.com

3rd April'04

Atten : Mr.Alok Saha
Sub : Approval of KEI Make I.T Cable)

Dear Sir,

In continuation to your letter reference no KFI/BALCO 2004, dated 20th March '04 we give our consent for the above after scrutinizing the documents submitted by you.

This approval is valid only for the cables having distinct marking of length, at every one (1) meter interval along with size & no of cores.

Thanking You.
For Balco Aluminium Smelter Project

At home



**MAHARASHTRA STATE ELECTRICITY
DISTRIBUTION COMPANY
CENTRAL PURCHASE AGENCY**
ISO 9001:2000 Certified
'Prakashgad', 1st Floor, Bandra (East), Mumbai - 51

SP/QC/Vendreg/acceptance/9500
2006

Date: Tue Aug 29 18:02:39 PT

To,
KEI INDUSTRIES LTD.
SP-919/920,RIICO Industrial Area,Phase - III,BHWADI,301109
kejind@vsnl.com

Sub: Acceptance of the vendor registration and handing over the vendor kit there of.

Dear Sir,

Central Purchase Agency, MSEDCL is pleased to inform that, subsequent to your request for the registra and verification of the documents, your firm is hereby registered with the MSEDCL e-Tendering system participate in the e-Tendering process.

In view of the above you are requested to collect the vendor kit from the office of Executive Director (SI) 1st Floor, Prakashgad, Bandra (E), Mumbai 51 on any Thursday except holiday.

This is a computer-generated letter and does not require signature.

Executive Engineer (Stores)
For Executive Director (Stores)

Tel: 26474211, 26472131, Fax: 26473429, Grams: COSGRIL
Mumbai



L&T Electrical & Automation
Projects

Projects

06th March 2014

TO WHOMSOEVER IT MAY CONCERN

This is to certify that M/s KEI Industries Limited is our approved vendor for supply of HT & LT Cables for MUMBAI MONORAIL PROJECT (MMRDA)

We have always found M/s KEI Industries Limited maintaining high quality standards, timely deliveries, competitive prices and resourceful in meeting our urgent requirements.

We are using their cables for our MUMBAI MONORAIL PROJECT and have found the performance satisfactory till date. The major cables supplied are listed below.

Item	Voltage Grade	Type	Quantity/Km
1 Core x 400	22 kv (E)	2XCEFaY	30.300
3 Core x 300	22 kv (E)	2XCEWY	33.440
3 Core x 240	22 kv (E)	2XCEWY	40.420
3 Core x 95	22 kv (E)	2XCEWY	1.010
Power & Fire Survival Cables	1.1 kv		89.000

The approximate lump sum values of the supplies of cables for monorail was arnd Rs 33 Cr.

For
Larsen & Toubro Limited

Parveen Satija
Manager - ESE Projects



Larsen & Toubro Limited, Electrical & Automation, Electrical Systems & Equipment
Northin Wing Level 2, Saki Vihar Road, Powai, Mumbai 400 072, Maharashtra, INDIA
Tel: +91 22 67054120 Fax: +91 22 67051173 www.Lnteba.com

Registered Office:
LiT House, N. M. Marg
Bellard Estate
Mumbai - 400 001, INDIA



BSES Limited

Generation Division :
Dahanu Thermal Power Station
Village Agwan, Dist. Thane - 401 608
Phone : (02528)-24447, 48, 49, 50
Fax : (02528) - 22038, 22063, 22876

Ref : BSES/DTPS/SNB/7239

Date : March 23, 2000

TO WHOMSOEVER IT MAY CONCERN

This is to certify that M/s.KEI Industries Ltd. (formerly known as Krishna Electrical Industries) having its registered office at D-90, Okhla Industrial Area, Phase-I, New Delhi - 110 020, supplied following FRLS cables against purchase order No.GEN-2254/GJB/92 dt.11/02/1993 for our 2 x 250 MW Dahanu Thermal Power Station which was commissioned in the month of March, 1995 at Dahanu, Maharashtra with the assistance of IERD Loan A/C No.3344-IN

POWER CABLES :
Single core upto 630 mm² conductor size multicore upto 300 mm² conductor size. Total Qty :- 188.00 Kms

CONTROL CABLES :
Maximum size of 20 core x 2.5 mm² Total Qty :- 431.00 Kms

INSTRUMENTATION CABLES :
Maximum of 12 Pair of 0.5 mm² & 1.5 mm² Total Qty :- 251.00 Kms

TOTAL ORDER Qty. =====> 870.00 Kms

The value of the above package was Rs.5.20 Crores (Rs.52 Millions Deemed Exports)

There are no complaints of above cables and are working satisfactory at our Dahanu Plant till date.

This letter have been issued as per the specific request of the party.

(S.N. Barde)

Dy.General Manager (O&M)

HEAD OFFICE : E-4 (II) M.I.D.C. Area Marol, Andheri (E), Mumbai-400 093.



CERTIFICATE OF ENLISTMENT



This is to certify that the enlistment of M/s.KEI Industries Limited, D-90, Okhla Industrial Area, Phase-I, New Delhi-110020, India has been enlisted as an approved Vendor for providing following Services / products:

KEI Cables upto 33 kv, E/G cables upto 11 kv, Control & Instrumentation Cables, Vertical Stranded Cables, Rubber Cables, Thermocouple Extension Cables, Fire Resistant Cables, E.G. V Cables upto 66 kv/110 kv/132 kv/220 kv, Fire resistant cables, has been extended for a period of one year w.e.f. 16th April, 2014 and is in consonance with the terms elaborated in notification letter ref. E3D/ENG/12006 dt. July 1, 2014.

CONSTRUCTION INDUSTRY DEVELOPMENT COUNCIL
D. R. P. N. SWARUP
DIRECTOR GENERAL

ER.R.VEDANTHAM,B.E.,F.I.E.,
CHIEF ENGINEER/THERMAL DESIGN
TAMIL NADU ELECTRICITY BOARD

5th FLOOR/WESTERN WING,
NPKRR MAALIGAI,
800,ANNA SALAI/MADRAS.2.

TO WHOM SO EVER IT MAY CONCERN

This is to certify that the KEI Industries Ltd., New Delhi have supplied the cables as furnished below for Tamil Nadu Electricity Board.

1. P.O.No.50 dt.8.12.88 for value of Rs.90.54 lakhs (FRLS PVC Control cables for ETPS,TPPS). 170 Kms. The Unit commissioned on 31.3.91.
2. P.O.No.92 dt.19.5.89 for value of Rs.166.66 lakhs 145.5 Kms (Zero Halogen FRLS Instrumentation cables for TPPS,MTSPS). The unit commissioned on 31.3.91.
3. P.O.No.277 dt.7.2.90 for value of Rs.29 lakhs 40 Kms (Zero Halogen FRLS Instrumentation Cable for MTSPS).
4. P.O.No.74 dt.7.4.92 for value of Rs.566 lakhs 908.5 Kms (NMTPP-FRLS Power Cables, FRLS Control Cables). The unit commissioned on 1994.
5. P.O.No.106 dt.4.12.92 for value of Rs.69.15 lakhs 37.5 Kms (Zero Halogen FRLS Instrumentation Cables for NMTPP). The unit commissioned on 1994.

The cables are put into use and their performance is so far satisfactory.

(R. VEDANTHAM)

CHIEF ENGINEER/THERMAL DESIGN

DT.19.9.96

Essar Projects Limited



Essar House, P.O. Box No. 7969,
Meharban, Mumbai-400 034, India.
Phone : (91-22) 495 0606
Fax : (91-22) 495 4318 20/12/99

TO WHOM SO EVER IT MAY CONCERN

THIS IS TO CERTIFY THAT M/S KEI INDUSTRIES LIMITED, D-90 OKHLA INDUSTRIAL AREA, PHASE-I, NEW DELHI-110020 HAS SUPPLIED US FRLS POWER AND CONTROL CABLES AGAINST P.O. NO. P07/4.37.27/L/165 DT. 12.01.95 FOR OUR 515 MW POWER PROJECT AT HAZIRA AS PER TATA CONSULTING ENGINEER'S SPECIFICATIONS & INSPECTION.

THE DETAILS OF THE CABLES SUPPLIED IS AS FOLLOWS:

POWER CABLES
TOTAL QUANTITY SUPPLIED : 159.00 KM
MAX. SIZE IN SINGLE CORE : 1000 SQ.MM
MAX. SIZE IN MULTICORE : 500 SQ.MM

CONTROL CABLES
TOTAL QUANTITY SUPPLIED : 187.50 KM
MAX. SIZE IN 2.5 SQ.MM : 61 CORE

TOTAL VALUE OF THE CONTRACT WAS RS. 442.71 LACS

THE SUPPLIES WERE MADE ON TIME AND THE PERFORMANCE OF THE CABLES HAVE SO FAR BEEN SATISFACTORY.

THE UNIT WAS COMMISSIONED PROGRESSIVELY IN OPEN CYCLE MODE FROM DEC'96 AND FULLY OPERATIONAL IN COMBINED CYCLE FROM MAY'97.

FOR ESSAR PROJECTS LIMITED

(K.C. KUNDU) 30/12/1999
SR. VICE PRESIDENT

THE TATA HYDRO-ELECTRIC POWER SUPPLY COMPANY LIMITED
THE ANDHRA VALLEY POWER SUPPLY COMPANY LIMITED
THE TATA POWER COMPANY LIMITED

TELEGRAM: "THERMAL"
TELEX: 011 72575 TECT IN

SUPPORT SERVICES CENTRE
TROMBAY GENERATING STATION
CHEMBUR, MUMBAI-400 074.

TEL: 556 2575 GENERAL
551 9403 ENGINEERING
551 1726 ADM/PERSONNEL
551 6273 CONSUMER RE.
551 1726 MATERIALS MGMT.

PERFORMANCE CERTIFICATE

TO WHOMSOEVER IT MAY CONCERN

This is to certify that M/s KEI Industries Limited, D-90, Okhla Industrial Area, Phase-I, New Delhi 110 020 has supplied us FRLS Power, Control & Instrumentation Cables totalling around Rs.3.0 crores for our various projects as per our list enclosed.

The cables are put into use and so far performance of the cables is satisfactory and delivery is as per schedule.


(Ms. C. BALIGA)
ASST. GENERAL MANAGER

Date : 13th May 1996

Place: Bombay

Registered Office : Bombay House, Horni Mody Street, MUMBAI-400 001.

 **KRUPP INDUSTRIES INDIA LTD.**
formerly BUCKAU WOLF INDIA

upp Industries India Ltd., Pimpri, Pune 411 018, India

TO WHOMSOEVER IT MAY CONCERN

his is to Certify that M/s KEI Industries Ltd., New Delhi, have supplied approx. 74KM of PVC Power Cables against our Purchase order No. BOHT/7897/93 Dt. 01.12.93 for 'Jaywada TPS. Project. We further certify that the Cables supplied are in successful operation for over five years.

KRUPP INDUSTRIES INDIA LIMITED


S.B. MOORTANTI
General Manager - Electrical

company of the
upp Engineering
oup

Krupp Industries India Ltd.
Pimpri, Pune 411 018, India
Tel : +91(020)774451, Fax : +91(020)771100
E-Mail : krupp@gaipn01.vsnl.net.in

Registered Office : 154C, Mittal To
15th Floor, 210 Nariman Point,
Mumbai 400 021, India
Registration No. 11-055509.

तार / TELEGRAMS: MAAM, DURGAPUR
दूरभाष / TELEPHONE : 5261
टेलिक्स / TELEX 0205-207



माइनिंग एण्ड मशीनरी कारपोरेशन लिमिटेड
MINING AND ALLIED MACHINERY CORPORATION LTD.
(भारत सरकार का उद्यम / A Govt. of India Enterprise)
दुर्गापुर / Durgapur-713210, बर्धमान / Burdwan

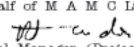
संदर्भ सं. / Ref. No.

दिनांक / Date 20/8/19C

TO WHOMSOEVER IT MAY CONCERN :

It is to certify that we have purchased from M/s. Krishna Electrical Industries, D-90, Okhla Industrial area, Phase-I, New Delhi- 110 00 20 approximately 280 K.M. of FRLS Armoured control cables from 1 core to 24 core, 2.5 mm² for Coal Handling Plant of Farakka Super Thermal Power Station, NTPC. The supplies have been made as per NTPC inspection and other engineering standards after successful type test and FRLS test.

For & on behalf of M A M C Ltd.


Dy. General Manager (Project).

पंजीकृत कार्यालय : दुर्गापुर-713210, Regd. Office : Durgapur-713210, पश्चिम बंगाल : West Bengal

Indian Oil Corporation Limited
Haldia Refinery
PO Haldia Oil Refinery
Dist- Midnapore, West Bengal-721606
Tel : 03224-382354/305041
Fax : 282141



Haldia Refinery

Dated February 8, 2008

To Whom It May Concern

This is to certify that KEI Industries Limited has supplied 5.5 KV grade (UE FRLS) 3c x 400sq.mm Aluminium Cable against PO RHRMGP1818/17619803 dt 09.07.2007

Quantity 5,103 KM vide KEI's Invoice no 72003790 & 72003802 Dt. 24.11.2007


Sanjay Sen
Chief Materials Manager (UC)
Haldia Refinery

CC to : Mr. Alok Saha

Dy. General Manager - Eastern India,
KEI Industries Limited,
2/1 Kalibari Lane, Flat#1
Jadavpur, Kolkata - 700 032,
West Bengal.

Regd. Office : O.B. All Vaver Jung Marg, Bandra(East), Mumbai-400051 (India)



पंजीकृत कार्यालय : इन्जीनियर्स इंडिया भवन, 1, भीकाजी कामा प्लेस, नई दिल्ली-110066
Regd. Office : Engineers India Bhavan, 1, Bhikaji Cama Place, New Delhi-110066

Procurement Development Department

Ref: 4994/PDD/RE/K082 9th January, 2014

M/s KEI Industries Ltd.
D-90, Okhla Indl. Area, Phase - I
New Delhi - 110 020

Subject: Revalidation of Enlistment with EIL

Dear Sirs,

We refer to your application on subject matter and are pleased to inform that your enlistment with EIL has been revalidated for the items as described below:

Item Description	Material / Range
- Cables - High Voltage - XLPE	Voltage grade: Upto 33kV(E)
- MV Power Cables - Fire Survival	---
- Cables - Medium Voltage - Power - PVC	---
- Cables - Control - PVC	---
- Cables - Fire Alarm & Communication	---
- Control Cables - Fire Survival	---
- Thermo Couple Extension Cables	---
- Signal Cables	---
- Signal Cables - Fire Resistant	---

This enlistment is valid for your works located at:

- 1) SP 919-920, 922, RIICO Industrial Area, Phase III, Bhiwadi, Distt. Alwar - 301 019.
- 2) A280-284, RIICO Industrial Area, Chopanki, Bhiwadi Dist. Alwar - 301 019.

Please note that this enlistment is subject to satisfactory execution of orders in delivery and quality of above mentioned items when ordered for our various projects.

Further, it may be noted that any change in the product range, location of Works/Sales Office, Management/ Organisation structure etc. shall be intimated to us immediately along with relevant document for our necessary action. In case information to any of the above referred changes is not intimated timely, our enquiries may not reach you.

Enlistment with EIL shall not guarantee any regular flow of enquiries.

In the event of direct / indirect orders for EIL associated projects, materials will be supplied strictly as per the material / range / works as stated above including agreed responsibility matrix, if applicable, failing which your enlistment with EIL is liable to be cancelled.

The validity of this ENLISTMENT is upto 31st January, 2017.

You are advised to apply for revalidation "on-line", 6 months before expiry of the enlistment. Detailed procedures for revalidation can be seen on our website www.engineersindia.com.

Thanking you,

Very truly yours,

Rajesh Kumar

(Rajesh Kumar)

Dy. General Manager

Procurement Development Department

उत्कृष्टता का आधार - हमारे कर्म DELIVERING EXCELLENCE THROUGH PEOPLE

फोन/Phone : +91-11-26762121 (EPABX)

फैक्स /Fax : +91-11-26167622

Visit us at <http://www.engineersindia.com>

E-mail : pd@eil.co.in

हिन्दी देस की एकता की कड़ी है।



मेटलर्जिकल एंड इंजिनियरिंग कन्सल्टेन्ट्स (इंडिया) लिमिटेड
भारत सरकार का संस्थान

METALLURGICAL & ENGINEERING CONSULTANTS (INDIA) LTD.
A Government of India Enterprise

Ref.11.51.9181.47/v-1041/ PA7481

Dated : 27.02.1995

M/s. KEI Industries Ltd.,
D-90, Okhla Industrial Area,
Phase-1,
New Delhi-110 020.

Sub : Vendor Enlistment.

Ref : Our letter No.11.51.9181.47/V-1041 dt.03.02.95

Dear Sirs,

We have examined the information sent by your regarding your products and your company has been enlisted in our Approved Vendor list for the following, including the products enlisted and informed vide our above referred letter.

1. Cable - Instrumental / Screen / Signal Cables
2. Cable - LT Power & Control Cables
3. Cable - Telephone Cables

We will contact you as and when the requirement for your products / services arises. In the meantime kindly keep us informed of new developments in your organisation.

Thanking you for your kind co-operation.

Yours faithfully,
for Metallurgical & Engineering
Consultants (India) Limited

J. S. Sambhir

(J. S. Sambhir)

Chief Contracts Manager
CVDC

Ranchi - 834 002, Bihar, India, Phone : 0651-501002501216

Fax : (910-651-5022189, Telex : 0625-209/262/286 MECON IN Gram : MECON



हिन्दुस्तान पेट्रोलियम कॉर्पोरेशन लिमिटेड

(भारत सरकार का संस्थान) हिन्दुस्तान पेट्रोलियम : 17, जमशेदपुर टाटा रोड, मुंबई 400 020.

HINDUSTAN PETROLEUM CORPORATION LIMITED

(A GOVERNMENT OF INDIA ENTERPRISE) REGD. OFFICE : 17, JAMSHEDPUR TATA ROAD, MUMBAI 400 020

8, शांती नगर, पुराना, पोस्ट बॉक्स नं. 155, मुंबई 400 021.

दोस्ताना : 2618031 हर : हिन्दुस्तान, टेलीफोन : 82133, 86770 फैक्स : 022-2611822

8, Shanti Nagar, Purana, Post Box No. 155, Mumbai - 400 001.

Tel. : 2618031 Telex : Hindpocrt, Telex : 02133, 86770 Fax : 022-2611822

e-mail : hr@hpcl.co.in

Ref: PUR/AS

24-Nov-99

Regn.No: 0035S0225

M/s. KEI Industries Ltd.
21-A, Gopal Mansion, Guru
Nanak Rd., Bandra (w),
Mumbai - 400 050.

Sub: Empanelment of Vendors

Dear Sir,

Reference your application against our Public Notice for empanelment of Vendors which appeared in various leading newspapers.

We are pleased to advise you that your name has now been registered/upgraded for the following jobs/supply items :-

Nature of Jobs/ Supply item : 19 Cables
Financial limit : Upto 100 Lakhs
Area of Operation : A

Please note that this registration does not confer any particular right on you and HPCL is not obliged to contact you for any or all of the requirement for the items for which you have been registered. Also this empanelment is subject to satisfactory execution of orders in delivery and quality of above mentioned jobs/supply items when ordered for our various projects. Your performance shall be periodically reviewed by us for continuation of your enlistment with HPCL.

Any change in your product range, location of Works/Sales Office, Management / Organisation Structure etc. should be intimated to us immediately quoting the above mentioned Registration No for our necessary action.

Thanking you,

Very truly yours

Ashok Singh

ASHOK SINGH

Manager Purchase & Vendor Mgmt

PUNJAB STATE ELECTRICITY BOARD
OFFICE OF THE CHIEF ENGINEER/RE&APDRP
F-2, SHAKTI VIHAR, PATIALA.

From

Chief Engineer/RE & APDRP
F-2, Shakti Vihar, PSEB, Patiala

To

M/S KEI Industries Limited
D-90, Industrial Okhla, Industrial Area,
Phase -1, New Delhi.

Memo No. 4118/RCZ-404/Vol-V

Dated: 25/1/99

Subject: Works Appraisal of M/S KEI Industries Limited, New Delhi for the supply of HT & LT cables.

The works appraisal of your firm has been carried out by Mr. A.K. Verma, Dy. C.E./MS, PSEB, Patiala. Your firm has been recommended for the supply of HT & LT cables for PSEB works under HVDS schemes subject to acceptance of type test certificates.

A.K. Verma
Dy. CE/REP,
for CE/RE & APDRP,
PSEB, Patiala.

CC:

1. Dy. CE/MS, PSEB, Patiala.
2. Sr. XEN/APDRP Amritsar, Jalandhar, Ludhiana, Patiala and Bathinda.

भारत पेट्रोलेयम कॉर्पोरेशन लिमिटेड
भारत पेट्रोलेयम कॉर्पोरेशन लिमिटेड
P & CS: 120521



BHARAT PETROLEUM CORPORATION LTD.
A Govt. of India Enterprise
AN ISO 9001:2008 & 14001:2004 AND
OHSAS 18001:2007 CERTIFIED REFINERY
21st January 2015

M/s. KEI Industries Ltd
Nirvan Corporate
7th Floor, Opp. Aghadi Naagar
Jijamata Road
Andheri Pump House
Andheri East
MUMBAI - 400 093

Dear Sir,

Sub: Renewal of Registration

We refer to the documents submitted by you for renewal of your vendor registration with us in response to our letter on the above subject.

Upon Scrutiny of your documents, we are pleased to advise you that we have renewed your Vendor Registration with us as per the following details.

CATEGORY
SUPPLY OF HT/LT CABLES / CONTROL CABLE (PVC / XLPE/ INSULATED) / INSTRUMENTATION / THERMOCOUPLE EXTENSION / INSTRUMENTATION ITEMS

Please note that there will be no change in your existing Vendor code (i.e. 120521), which must be referred to in all future correspondence.

Further it may be noted that:

- Registration does not necessarily bind us for sending Enquiries/Placement of Orders on you which is at the sole discretion of BPCL.
- Continuation of registration is subject to satisfactory execution of our Orders by you with respect to Delivery, Quality of the job and other terms and conditions.
- Any change in company constitution, Management / Organization structure/set up, location of the works, etc shall be immediately intimated to BPCL.
- In case you do not respond to our "Request For Quotation" for three consecutive times, your registration is liable for cancellation.

Please sign and return the duplicate copy of this letter by the authorized signatory/ies as acknowledgement of this letter and your acceptance for our record.

Yours faithfully,

for BHARAT PETROLEUM CORPORATION LIMITED

SUNIL ADVANI

SR. MANAGER (P & CS)

हार्दिक अडानी : मुंबई, फोन - 400 074, मोबा : 2552 4868/2552 4890/2553 3888/2553 3999, फॅक्स : 2554 2070
ऑफिस : भारत पेट्रो, कर्मचारी रोड, नारद पुर, मुंबई - 400 001.

Mumbai Refinery, M/s. Mumbai - 400 074, Tel: 2552 4868/2552 4890/2553 3888/2553 3999, Fax: 2554 2070
Registered Office: Bharat Petroleum, 4 & S. Courtney Road, Ballard Estate, Mumbai - 400 001.



मंगलूर रिफाइनरी एण्ड पेट्रोकेमिकल्स लिमिटेड
MANGALORE REFINERY AND PETROCHEMICALS LIMITED

(असल एंड नेचुरल गैस कॉर्पोरेशन लिमिटेड को स्वतंत्र कंपनी) (A Subsidiary of Oil and Natural Gas Corporation Ltd)
पंजीकृत कार्यालय : कुल्लूथूर पोर्ट, चारु कास्टोपलम, मंगलूर, रजि. ऑफिस: कुल्लूथूर P.O., वा. कलपुडा, MANGALORE - 575 030
फोन: 0824 2270400, फॅक्स: 0824 2271404
ई-मेल: mmpm@mnpml.co.in, वेबसाइट: www.mnpml.co.in

"AN ISO 9001 AND 14001 CERTIFIED COMPANY"

Date : 12.03.2014

TO WHOMSOEVER IT MAY CONCERN

This is to certify LOA No.: SKG/6782-000-XT-MR-0230/25/105/P3-0116 dated: 01.04.2010 for ₹ 14,93,60,960.00 (Rupees Fourteen Crore Ninety Three Lakh Sixty Thousand and Nine Hundred Sixty only) was placed on M/s KEI Industries Limited, D-90, Okhla Industrial Area, Phase I, New Delhi-110020 for supply of the following sizes of HV Power Cables for Phase III Refinery Project of M/s MRPL, Mangalore-

Item Sl. No.	Item Description	UOM	Quantity
1	HV POWER CABLE, 33KV(E), 1C, 185 SQ.MM, CU CONDUCTOR, XLPE INSULATED, FLAT STRIP ARMOUR, PVC OUTER SHEATH, FR TYPE	METERS	55000
2	HV POWER CABLE, 33KV(E), 1C, 300 SQ.MM, CU CONDUCTOR, XLPE INSULATED, FLAT STRIP ARMOUR, PVC OUTER SHEATH, FR TYPE	METERS	33500
3	HV POWER CABLE, 33KV(E), 1C, 630 SQ.MM, CU CONDUCTOR, XLPE INSULATED, FLAT STRIP ARMOUR, PVC OUTER SHEATH, FR TYPE	METERS	6000
	TOTAL QUANTITY	METERS	94500

This is to certify that M/s KEI Industries Limited have supplied the above quantity of cables by September 2010 and nearly 80% of the above supplied quantity of cables have been laid & commissioned and are working satisfactorily since December 2011 to till date progressively.

This certificate is issued on specific request by M/s KEI Industries Limited for participating in an International Contract for Cables.

For Mangalore Refinery and Petrochemicals Limited

B. Sudarshan

General Manager (Project Phase III)

Office Office : L.G. Mercantile House, 15 K.G. Marg, Mumbai - 400 001, Ph: 011 23463100, Fax: 011 23463201
Mangalore Office : MRPL opp. to KSSIDC Industrial Estate Rajajinagar, Bangalore 560 010, Ph: 080 22642200, Fax: 080 - 23505501
Mumbai Office : Maker Tower, 7th Wing, 16th Floor, Colaba, Mumbai - 400 005, Tel: 91 22 22173000, Fax: 91 22 22173203

दि फर्टिलाइजर्स एण्ड केमिकल्स
ट्रावन्कोर लिमिटेड



THE FERTILISERS AND CHEMICALS
TRAVANCORE LIMITED

A GOVERNMENT OF INDIA ENTERPRISE
UDYOGAMANDAL DIVISION, UDYOGAMANDAL - 683 501, KOCHI, INDIA.

PHONE: KOCHI (0484) 541106 TO 541109, 541872, 541873 GRAMS: UDYOGFACT TELE: 0885-5007 FACT IN FAX: (0484) 532004
Udyogamandal,
27th October 99

TO WHOM SO EVER IT MAY CONCERN

This is to certify that M/s KEI INDUSTRIES LIMITED, New Delhi have supplied for our 900 TPD Ammonia Project, following Instrument Signal and Power cables for a total value of Rs.1.24 Crores against our Purchase Order No.3020 / 14-021 / 287 / 7177 dated 14-10-1995.

- Signal Cables (max. size 12 Triad X 20 AWG individual and overall shielded cables) : 88.40 Kms.
- Thermocouple Extension Cables (max. size 12 Pair X 20 AWG - KX and RX type) : 24.10 Kms.
- Power Cables (max. size 3 core X 150 sqmm) : 11.40 Kms.
- Heat Resistant 2 core X 16 AWG Special Cable : 0.20 Kms.

The 900 TPD Ammonia Project has been commissioned in March 1998 and the cables supplied by the above party have been performing satisfactorily till date.

For THE FERTILISERS AND CHEMICALS
TRAVANCORE LIMITED, UDL - DIVISION.

S. JAYATHIRKAN,
CHIEF ENGINEER,

ELECTRICAL & INSTRUMENTATION,
FACT - UDYOGAMANDAL DIVISION.

HEAD OFFICE AND REGISTERED OFFICE: ELOOR, UDYOGAMANDAL.
PETROCHEMICAL DIVISION, MARKETING DIVISION, FACT ENGINEERING AND DESIGN ORGANISATION (FEDO) UDYOGAMANDAL
COCHIN DIVISION - AMBALAMEDU, FACT ENGINEERING WORKS (FEW) - PALLURUTHY

TATA CHEMICALS LIMITED
MITHAPUR, OKHAMANDAL, GUJARAT STATE



GRAM : TATAKEM-MITHAPUR
PHONE : - 0289922-2207/2225
FAX : 028992-2227

MITHAPUR 361 345

OUR REF. : _____

Date 02.05.95

TO WHOM IF MAY CONCERN

This is to certify that M/s KEI Industries Ltd., New Delhi have supplied various types of control, signal and thermocouple compensating cables for various projects (cement plant, power plant & caustic soda) for Tata Chemicals Ltd. at Mithapur and fertilizer division at Babrala, U.P. through consultant M/s. Sham-progetti, spa & PDIL for ammonia and urea plant. M/s. KEI have supplied following cables and the plants have been successfully completed.

- Control cables, 175 kms.
- Signal Cables, 95 kms.
- Thermocouple compensating cables, 25 kms.

The performance and quality of cables supplied is found to be good. Further we would like to add that M/s. KEI are regular supplier of control / signal cables to Tata Chemicals for various ongoing projects and the supply is affected in stipulated period.

(N. K. Adya)
Corporate Manager, Instrumentation

REGISTERED OFFICE : BOMBAY HOUSE, 24, H.M.I. MODY STREET, BOMBAY-400 001.

Save Energy for Benefit of Self and Nation



Uttar Gujarat Vij Company Ltd.

CIN - U40102GJ2003SGC042906



No.UGVCL/SP/11/HT AB Cable/KEI/ 3258

Date: 14-8-15

TO WHOM SO EVER IT MAY CONCERN
SUPPLY CERTIFICATE

This is to certify that M/s KEI Industries Ltd., Vadodara, have supplied the following size of HT Aerial Bunched Cable from their works at Bhiwadi, Rajasthan, against the following Purchase Orders placed by this office.

Sl. No.	Purchase Order No. & Date	Item	Order Quantity (Kms.)	Supplied Quantity (Kms.)	Year of Supply
1.	UGVCL/SP/11/326/HT ABC/58 Date: 04/01/2011	3CX70mm2+70mm2 XLPE insulated HT Aerial Bunched Cable.	4	4	2011-12
2.	UGVCL/SP/10-11/1/326/HT ABC/KEI/Repeat/825 Date: 21/03/2011	3CX70mm2+70mm2 XLPE insulated HT Aerial Bunched Cable.	1	1	2011-12
3.	UGVCL/SP/10-11/1/381/HT ABC/KEI/3682 Dtd:13/12/2011	3CX70mm2+70mm2 XLPE insulated HT Aerial Bunched Cable.	17	17	2011-12
4.	UGVCL/SP/458/1/KEI/1214 Date: 9.4.13	3CX70mm2+70mm2 XLPE insulated HT Aerial Bunched Cable.	23	23	2013-14
		3CX120mm2+100mm2 XLPE insulated HT Aerial Bunched Cable.	6	6	2013-14
5.	UGVCL/SP/591/11KV HT AB Cable/14-15/KEI/5039 Date:15.12.14.	3CX70mm2+70mm2 XLPE insulated HT Aerial Bunched Cable.	12	12	2014-15
		3CX120mm2+100mm2 XLPE insulated HT Aerial Bunched Cable.	2	2	2014-15

This certificate is given to M/s KEI Industries Ltd as requested by them vide letter Dtd - 11.8.2015.

Yours faithfully,
For & on behalf of UGVCL., Mehsana
(S.R.Patel)
Chief Engineer (P&P)

To,
M/s. KEI Industries Ltd, 803, Siddharth Complex,
Nr, Hotel Express, RC Dutt Road, Vadodara- 390 007

Regd. & Corporate Office : Visnagar Road : Mehsana : 384 001 (North Gujarat)
Phone No: 02762- 222080-81 Fax No: 02762-223574/236256



L&T Construction
Buildings & Factories

07th June, 2014

TO WHOMSOEVER IT MAY CONCERN

This is to certify that M/s KEI Industries Limited is our preferred vendor for supply of HT, LT (Control & Power) and Fire Survival Cables along with Wires for Mumbai International Airport Limited - Terminal 2.

We have always found M/s KEI Industries Limited maintaining high quality standards, timely deliveries, competitive prices and resourceful in meeting all our requirements.

We have extensively used their various types of cables & wires at Mumbai International Airport Project (MIAL) and have found the performance satisfactory.

Total PO value till date is INR 26,46,10,554.00 for supply of Cables & ZHFR Wires to MIAL.

For Larsen & Toubro Limited,



Authorized Signatory

Larsen & Toubro Limited, Construction, Buildings & Factories
Head Office: Mount Road, Marolli, E B. No. 979, Chennai - 600 089, INDIA
Tel: +91-44-2252 6000, 2252 8000 Fax: +91-44-2259 7288 www.LTCL.com
Site Office: Mumbai International Airport Project (MIAL) Site, Behind Sahar Police Station, Sahar Airport, Andheri (East), Mumbai - 400 095. Tel: +91-22-2681 0342 Fax: +91-22-2681 0386

Registered Office:
L&T House, N. M. Marg
Robert Estate
Mumbai 400 001, INDIA

SUZLON ENERGY LTD.



5th Floor, Godrej Millennium
9, Korgaon Park Road, Pune - 411 001, India

☎ +91-20-4022000, 4015760
☎ +91-20-4022100, 4022200
✉ pune@suzlon.com
☎ www.suzlon.com

10/03/2005

TO WHOM SO EVER IT MAY CONCERN

THIS IS TO CERTIFY THAT M/S. KEI INDUSTRIES LIMITED, HAVING ITS REGISTERED /HEAD OFFICE AT D-90,OKHLA INDUSTRIAL AREA, PHASE-I, NEW DELHI- 110 020 HAS MANUFACTURED AND SUPPLIED 1.1 KV GRADE ANNEALED TINNED COPPER CONDUCTOR, FLEXIBLE, MELINEX TAPPED EPR INSULATED, PCP SHEATHED (AS PER IS:9968 PART 1) RUBBER CABLES AGAINST OUR FOLLOWING PURCHASE ORDERS.

P.O.NO.	CABLE SIZE	TOTAL QTY	P.O VALUE (Rs.)
SEL/DMN/1250/000808/04-05	1Cx240 SQ.MM	76626	830,48,134/-
SEL/DMN/1250/000809/04-05	1Cx120 SQ.MM	25542	
	1Cx 50 SQ.MM	12040	
	1Cx 185SQ.MM	18060	
	1Cx 10 SQ.MM	8084	
	1Cx 10 SQ.MM	8084	
	1Cx 1.5 SQ.MM	17028	
	1Cx 300 SQ.MM	3010	
SEL/DMN/1250/000538/04-05	1Cx240 SQ.MM	48825	515,29,616/-
SEL/PWT/1250/000223/04-05	1Cx120 SQ.MM	16225	
	1Cx 50 SQ.MM	8290	
	1Cx185 SQ.MM	11150	
	1Cx 10 SQ.MM	5500	
	1Cx 10 SQ.MM	5500	
	1Cx1.5 SQ.MM	16875	
	1Cx 300SQ.MM	875	

THE SUPPLIES HAVE BEEN MADE TO OUR DAMAN & PONDICHERRY UNITS AND THE PERFORMANCE OF THE CABLES HAVE SO FAR BEEN SATISFACTORY.

FOR SUZLON ENERGY

(Signature)
AUTHORISED SIGNATORY

M.S.E.B., C.P.A. MUMBAI

MAHARASHTRA STATE ELECTRICITY BOARD

Telephone: 642 2211
642 2131

Telex : 811 - 78293 MSEB
811 - 78294 MSEB IN

FAX : 91 22 644 3749
91 22 648 1329

Gram : COSGRID

Central Purchase Agency,
Prakashgad, 1st floor,
Station Road G-9, Bandra (West),
MUMBAI - 400 051.

SP/MISC/XI/10

To **13436-1**

13 NOV 1987

M/s. KEI Industries Limited,
21-4, Gopal Mansion, Gurunank Road,
BANDRA (West), MUMBAI-400 050.

Sub :- Request for issue of certificate of supplies.

Ref :- Your letter No. KEI/97/BOM dtd. 18-11-97.

Dear Sirs,

With reference to the letter, regarding performance certificate for supply of cable against the order as indicated below :

Order No. & Date	Description	Ordered & supplied quantity
SP/T-1012/IBRD/10326	i) L.T.FVC Cable 3.5C x 300 sq.mm	27 KM
dtd. 29-7-95.	ii) L.T.FVC Cable 3.5C x 185 mm2	58 KM

According to the above said order is executed from 27-11-95 to 6-1-96 with value of Rs. 2,48,58,841/-. We have not received any adverse report so far. Hence performance of cable can be considered satisfactory.

Yours faithfully,

(Signature)
Executive Engineer (St.XI)
For Technical Director (St.)



TOYO ENGINEERING INDIA LIMITED

TOYO HOUSE, LAL BAHADUR SHASTRI MARG, KANJURMARG (WEST),
MUMBAI - 400 078. • TEL : (91-22) 579 9001 • FAX : (91-22) 579 9061 / 62
INTERNET SITE : www.teil.com

July 04, 2001

TO WHOMSOEVER IT MAY CONCERN

This to certify that, M/s KEI Industries Limited having its office at D-90, Okhla Industrial Area, Phase-I, New Delhi has supplied us 148.600 K.M. of Halogen Free FRLS Instrument Signal, Thermocouple Extension, Control & Grounding Cables, valuing Rs. 140.81 Lacs for our IPL LPG Import/Export Facility Project at Haldia under inspection from M/s PDIL. The details of the order is as follows :

- A) **Instrument Signal Cables**
Max. Size : 12 Triad x 1.5 Sq. mm
- B) **Thermocouple Extension Cables**
Max. Size : 12 Pair x 20 AWG (KX)
- C) **Instrument Control Cables**
Max. Size : 3 Core x 25 Sq. mm.

Deliveries of the cables are as per the Project Schedule and so far performance of the same is found satisfactory.

For TOYO ENGINEERING INDIA LTD.,

B. N. CHAVAN
PROJECT MANAGER

DELHI OFFICE: UNITED COMMERCIAL BANK BLDG., 1ST FLOOR, PARLIAMENT STREET, NEW DELHI-110 001.
TEL.: (91-22) 371 1952



GUJARAT STATE FERTILIZERS & CHEMICALS LIMITED

Registered Office : P. O. Fertilizer Nagar - 391 750, Dist. Vadodara, Gujarat, India.

Phone : 372051, 372451
372651, 372751
372841
Fax : 0265-372966, 370119

05-01-2001

TO WHOMSOEVER IT MAY CONCERN

THIS IS TO CERTIFY THAT **M/S KEI INDUSTRIES LIMITED**, D-90, OKHLA INDUSTRIAL AREA, PHASE-I, NEW DELHI HAS SUPPLIED US ABOUT **200 KM**s OF FRLS BRAIDED CONTROL, INSTRUMENT SIGNAL AND COMPENSATING CABLES FOR OUR 1350 MTPD AMMONIA EXPANSION PROJECT, AT THE COST OF RS. 242 LACS VIDE OUR MAIN PURCHASE ORDER NO. GSFC/9413/AEP/736(D)/1177 DT. 21.03.1996 AND AMENDED THEREAFTER.

THE CABLES WERE DESIGNED, MANUFACTURED AND TESTED AS PER **LINE/TICB** SPECIFICATIONS.

SO FAR THE PERFORMANCE OF THE CABLES IS FOUND TO BE SATISFACTORY.

FOR **GSFC LTD.**

H.V. KACHHADIA
SR. MANAGER (Inst)



LARSEN & TOUBRO LIMITED

ENGINEERS
REGISTERED OFFICE:
137/138, Scheme 1, Sector 45, Gurgaon

TELEPHONE : 279 8888
TELEX : 550 140, 550 1411
TELEFAX : 11 71055, 11 71054,
11 71055
FAX : 022-8561056, 1518

REPLY TO
Power Works
BARKI VIHAR ROAD
P.O. BOX 8901
MUMBAI 400 072
9th NOV, 2000

IN REPLY
PLEASE QUOTE:

TO WHOMSOEVER IT MAY CONCERN

This is to certify that M/s. KEI INDUSTRIES LTD, D-90, OKHLA INDUSTRIAL AREA, PHASE-I, NEW DELHI- 110020 has supplied us COPPER FRLS POWER, CONTROL & INSTRUMENTATION CABLES for our 115MW IIPL, HALDIA COMBINED CYCLE POWER PLANT at a value of Rs. 33. 85 millions. The details are as follows.

P.O.NO.	MAX. SIZE	QTY.- KM.
COPPER FRLS POWER CABLES		
PGTX/585558/NKK/DSC DT.26.11.97	3.5C x 300 SQ.MM	
PGTX/585032/NKK/DSC DT.28.08.97	1C x 400 SQ.MM	
PGTX/585046/NKK/DSC DT.07.12.98	1C x 300 SQ.MM	66. 047
COPPER FRLS CONTROL CABLES		
PGTX/585561/JF/DSC DT.08.12.97	37C x 1. 5 SQ MM	
PGTX/585016/JF/DSC DT.24.06.98	24C x 1. 5 SQ.MM	76. 149
COPPER FRLS SIGNAL CABLES		
PGTX/595001/JF/DSC DT.16.04.98	12T x 1. 5 SQ.MM	
PGTX/595033/JF/DSC DT.31.08.98	12P x 16AWG (KX)	109. 001

The supplies were completed on time and the performances of the cables have so far been satisfactory.

The power plant was commissioned in open cycle mode in Jan, 2000 and fully operational in combined cycle from May, 2000.

FOR LARSEN & TOUBRO LTD.

P.K.SHAH, MANAGER, GTPB, ENGG.

REGIONAL OFFICES: P.O. BOX 518, CALCUTTA 700 071; P.O. BOX 622, NEW DELHI 110 015; POST BAG 547, MADRAS 600 002; P.O. BOX 115, PUNE 411 008
BRANCH OFFICES: AHMEDABAD BANGALORE BARODA BHILAI BHOPAL BHUBANESHWAR CHANDIGARH COIMBATORE
DURGAPUR HYDERABAD JAMNABAD JODHPUR LUCKNOW MUMBAI RAIPUR RAJOURY ROURKELA VISAKHAPATNAM



PUNJ LLOYD LTD

REGISTERED &
CORPORATE OFFICE
PUNJ LLOYD HOUSE
17-18, NAGRU PLACE
NEW DELHI- 110 019
INDIA

TEL 4300 123
FAX 011 4200 111
E-mail : info@punjlloyd.com

Date: 17th October, 2000

TO WHOM SO EVER IT MAY CONCERN



This is to certify that KEI Industries Ltd., has supplied 87 Kms of Signal & Control and Thermocouple Extension Cables as per EIL Specification from their works at New Delhi & Bhiwadi vide our P.O. No. PROC/EIND07/140411 dated 31/08/1998 for our SRU Project at IOCL Mathura Refinery, which was commissioned in the month of December 1999. The Performance of Cables is satisfactory and there is no adverse report against the cables so far.

This letter have been issued on specific request of the vendor.

For PUNJ LLOYD LTD.

ABHIJIT GUHA
Sr. Manager-Materials

Designers of Plants and Machinery for Petrochemicals and Man-Made Fibres

CHEMTEX ENGINEERING OF INDIA LTD.

Registered Office :
CHEMTEX HOUSE, HIRANANDANI GARDENS, MAIN STREET, POWAI, MUMBAI-400 076.

LTD.

Cable : CHEMTEXENG
Phone : 5784491, 5784168, 577299
Fax : 91-22 5753998

Our Ref. : VL / 97 / ZOK002

Date : 25-Nov-97

To : KEI INDUSTRIES LTD
D-90, PHASE-I,
OKHLA INDL. AREA,
NEW DELHI - 110020

Sub. : ENLISTMENT AS AN APPROVED VENDOR

Gentlemen :

We thank you for the keen interest evinced by you in getting enlisted with us as an approved vendor.

After having examined your application and reviewing the credentials, we are pleased to inform that you have been enlisted with CHEMTEX as an approved vendor, for the items described below :

SR.NO.	ITEM DESCRIPTION	MATERIAL / RANGE
1	POWER CABLES	
2	CONTROL CABLES	
3	INSTRUMENTATION CABLES	

Please note that this enlistment is subject to satisfactory execution of orders in delivery and quality of above mentioned items, if and when ordered on you for future projects handled by Chemtex.

You are advised to keep us informed of any change in the product range, location of works/sales office, management/organisation structure etc. Also ensure that relevant documents incorporating the changes are submitted to us as and when due.

Very truly yours,
CHEMTEX ENGINEERING OF INDIA LTD.

General Manager (Procurement)



MAHARASHTRA STATE ELECTRICITY TRANSMISSION COMPANY LIMITED

PHONE : (0) 922-3695130
FAX : 922-2651 8587
E-mail : corporate@mahatransco.in

OFFICE OF THE CHIEF ENGINEER (PROJECT & DESIGN)
TRANSMISSION PROJECT DEPARTMENT
5th FLOOR, PLOT NO.C-19, E-BLOCK,
PRAKASHGANGA, BANDRA - KURLA COMPLEX,
BANDRA (EAST), MUMBAI-400 051.

Ref No- MSETCL/CO/Prj.&Des./D&E-S3/DTF/Cable/ - 6986 Date: 26 MAY 2015

To,
SUYOG URJA PVT. LTD.

6, Fiji Bldg., Pacific Enclave,
Near Hiranandani Hospital,
Powai, Mumbai-400076.

Sub: Approval of Guaranteed Technical Particulars and Quality Assurance Plan in respect of
KEI make LT PVC Insulated FRLS Type Control/Power Cables for Establishment of
132/33 kV substation Pishor for 50 MW Wind Power Project At-Anjannadi, Dist-
Aurangabad.

Ref: 1) Your Letter No.: SUPLMH/Anjannadi/GTP-DRWG/CONTROL CABLE/2904-001
Dtd-29.04.2015 received on 05.05.2015 to this office.

2) Our Email on 12th May 2015.

Dear Sirs,

We refer to your above mentioned letter under reference (1); vide which you have submitted the documents in respect of KEI make LT PVC Insulated FRLS Type Control/Power Cables. The Guaranteed Technical Particulars (GTPs) have been scrutinized in terms of our specifications/relevant standards and found to be generally in order and hence approved. You have not submitted Type Test Reports & Quality Assurance Plan. Hence you are requested to supply the same as per attached Quality Assurance Plan herewith. The details of approved Guaranteed Technical Particulars (GTPs) are furnished in Annexure-A.

One set of above approved Guaranteed Technical Particulars (GTPs) with corrections indicated by us in red ink is enclosed. It is requested to incorporate the changes and supply the Cables accordingly. You are requested to furnish copies of approved GTPs to our concern field offices.

The Quality Assurance Plan (QAP) approved according to us vide our Letter No. MSETCL/CO/PRJ.&DES./D&E-S3/TKC/7-1225/S&W/2709 dtd-24.02.2015 for LT PVC/ XLPE Insulated FRLS Type Cables (KEI make) has been verified. The same are found to be generally in order & hence applicable for this project also.

It is requested to submit the valid Type Test Reports for the same before commencement of supply. Otherwise dispatch instructions will not be issued.

E:\D&E S3\APPROVAL\S\SUYOGANJANNADI\Cable.docx

Page 1 of 3



Ref : PESM/LTSM/CBL

Dated : 1997-05-03

M/s. KEI Industries Ltd.,
D-90, Okhla Industrial Area,
Phase - I,
New Delhi - 110 020.

Kind Attn : Mr. Sanjay Mehra - Asst. Manager (Mktg.)

Sub : Enlistment of Supplier for manufacture & supply of Power & Control Cables for Power Projects

Ref : Letter No. KEI/433(D)/97/ABB dated 18th Feb. '97

Dear Sirs,

We thank you for the interest shown by you in associating with us for the implementation of the various Power Projects being set-up / proposed to be set-up by us. We sincerely appreciate the efforts put in by your people in explaining to us the functioning of the various departments / groups in your organisation with regard to above mentioned package.

We are enclosing herewith a write-up on Supplier Classification process which is being adopted for the various packages being sublet by us. As can be seen from the enclosed document, we have kept ISO accreditation as one of the criteria for qualification of the supplier in the category Level-II, i.e. "Qualified". In all our EPC contracts, ISO/ ISO equivalent procedures is demanded by customers. It is just a matter of time that ISO accreditation will be considered as essential for EPC contractor as well as his suppliers. Hence, for you to be a "Qualified" supplier in such EPC projects, it is imperative for you to continue to have ISO accreditation.

While for the present, we have decided to issue tender enquiries to both 'Approved' as well as 'Qualified' suppliers, we may add that in future, we are targeting to restrict tender enquiries only to the qualified suppliers. Further, a 'Qualified' supplier stands to gain advantage in a competitive situation, compared to an 'Approved' supplier.

We have taken note of the information given by your organisation and wish to inform you that for the present, we have classified you as a "Qualified" Supplier for PVC LT Cables & Control Cables.

As a 'Qualified' Supplier, we expect you will continue to endeavour attaining a very high standard of operation in your organisation, so as to meet the TQSR threshold for levels III & IV, i.e. Preferred / Partner, as envisaged in our Supplier Classification Process. Accordingly, we would request you to keep us updated on any process related changes / additions being made in your organisation to enable us to do the reassessment / requalification as may become necessary.

Thanking you,

Yours faithfully,
for Asea Brown Boveri Ltd.,

Suresh Krishna



प्रोजेक्ट्स एण्ड डेवलपमेंट इण्डिया लिमिटेड

(भारत सरकार का उपक्रम)

PROJECTS & DEVELOPMENT INDIA LIMITED

(A GOVT. OF INDIA UNDERTAKING)
PDL BHAWAN, A-14, SECTOR-1, NOIDA-201 301
DISTT. GAUTAM BUDDH NAGAR, (U.P.) INDIA

PNMM/REGN/ P0442

Date : 01.10.2009

M/s KEI INDUSTRIES LIMITED
D-90, OKHLA INDL. AREA/PHASE - I
NEW DELHI-110020

Subject : VENDOR REGISTRATION CERTIFICATE

Dear Sirs,

We are pleased to inform you that you have been enlisted with PDIL as an approved vendor for the item(s) described below:

ITEM CODE	ITEM DESCRIPTION	MATERIAL / RANGE
311801	INSTRUMENT POWER & CONTROL CABLES	
311802	EXTENSION & COMPENSATING CABLES	
810501	HT POWER CABLE	Upto 33 KV
810502	LT POWER CABLES	
810503	CONTROL CABLE	

Please refer the above reference number in all your future correspondence related to above subject. Kindly note that this enlistment is subject to satisfactory execution of orders in delivery and quality of above mentioned items when ordered for our various projects.

Further, it may be noted that any change in the product range, location of Works / Sales office, Management/ Organisation structure etc. shall be intimated to us immediately along with relevant documents for our necessary action. In case, information to any of the above referred changes is not intimated timely, the enlistment with us is liable to be cancelled. Your performance shall be reviewed for continuation of your enlistment with PDIL.

This registration is valid till 30.09.2014. You shall contact us at least 180 days in advance for revalidation of your registration with us, failing which, your name may be deleted from our vendors list.

Thanking You.

Yours faithfully,

(R. S. Singh)
Chief Manager (Materials)



Regd. Office : PDIL Bhawan, A-14, Sector-1, Noida-201301
Phone : +91 - 120-2529842/434751 Fax : +91 - 120-2520801, 2541493
E-mail : noda@pdil.in, pdilnoda@vsnl.com
Other Office : Sindh, Baroda, Mumbai, Kolkata and Chennai
Visit us at : www.pdil.in

SUPERINTENDING ENGINEER (Training)
Office of the Chief Engineer (Elec.),
P.W.D. Deptt., Govt. of Maharashtra,
Bandhankam Bhavan, 3rd floor,
Marban Road, Fort,
Mumbai-400 001.

Website : www.mahapwd.com
Email : elmumbai.ce@mahapwd.com
No.CE/Elec./Desk-3/HDM/22 SEP 2014

Telephone : (022) 22013415/16/17
Fax : (022) 22016900
Date : 22 SEP 2014

To,
✓ M/s. KEI Industries Ltd.
101/102/103, Vastu Shilp, Vastu
Enclave, Andheri Pump House,
Jijamata Road, Andheri (E),
Mumbai-400 093

Sub : Approval to use material on works carried out by Government of Maharashtra.
Ref : 1) Your Letter No.MUM/DT/2013-14 Dated 19.03.2014
2) This Office Letter No. C.E.(Elec.)/Desk-3/224/2014 Date 25.03.2014
3) Factory Visit Dated 5.04.2014
4) Test Report of MSME Testing Station, Hyderabad - 500 018
Report No.1) 39231 Date - 05.09.2014, 2) 39230 Date - 05.09.2014

Sir,
The subject proposal submitted by you was examined by this office and now the undersigned is pleased to accord approval to the following materials for using it on works carried out by Government of Maharashtra W.E.F. the date of issue of this letter.

Name of material : " Wires & Cables "
Place of manufacture : SP 920, Phase-III, RICO Industrial Area, Bhiwadi, Distt :Ahwar(Rajasthan)
301019
Brand Name : " KEI "
Technical Specifications of the Materials :

Sl.No.	Name of Product	Validity
1	PVC insulated Wires & Cables for working voltage upto and including 1100V	Up to 31 st August 2017
2	Crosslinked polyethylene insulated PVC sheathed cables : Part 1 for working voltage upto and including 1100V	
3	Crosslinked polyethylene insulated PVC sheathed cables : Part 2 for working voltage from 0.3 kV upto and including 20kV	

Manufactured as per ISI No. : For item No. For item No 1) IS : 694-1990, 2) IS : 7098 (Part 1) : 1985 / IS : 1554 (Part 1) : 1988 For item No 3) IS : 7098 (Part 2) : 1985 / IS : 1554 (Part 2)
Whether having ISI No : NO
License No. : Nil
Whether covered by House hold Electrical : N.A.
Manufacturing Certificate No. : N.A.
Validity : N.A.
Authority to issue M.C. : N.A.

The above approval given subject to the performance of the material during this period remains satisfactory. In case of unsatisfactory performance, the approval accorded shall be withdrawn forthwith.

Yours faithfully,

(S.A.Patil)
Chief Engineer (Elec.)
P.W. Deptt., MUMBAI-1.

Copy forwarded to Superintending Engineer Regional Elec. Circle MUMBAI / PUNE / AURANGABAD / NAGPUR / AMRAVATI / NASHIK for information.



BHARAT HEAVY ELECTRICALS LIMITED
(A Government of India Undertaking)
Boiler Auxiliaries Plant, Ranipet - 632406, INDIA

Phone : 04172 - 254425, 254533
Fax : 04172-241131
Email : gchandrasekhar@bhel.co.in

PURCHASE DEPARTMENT VENDOR REGISTRATION CERTIFICATE

BAF : PURCHASE

DATE : 14/12/02

TO
M/s **KEI INDUSTRIES LIMITED**

D-90, PHASE - I,
OGHLA INDUSTRIAL AREA

NEW DELHI 110020

Dear Sir,

We are pleased to inform you that your firm has been provisionally registered with Vendor Code 1265 for the supply of the following products / items, subject to the conditions stipulated below:

DESCRIPTION OF ITEM	SPECIFICATION	VENDOR CODE
CABLES LT POWER - AL		1265
CABLES -CU CONTROL		1265

Please indicate your vendor code in all future Correspondence.
Thanking You,
for BHEL, RANIPET

**MANAGER / PURCHASE
SUPPLIER DEVELOPMENT CELL**

Condition :

- 1) Please note that this registration does not guarantee for award of any contract/order for the supply of above items.
- 2) This registration does not confer on the Vendor any right to demand mailing of enquiries

PRASAD BHARATI
(INDIA'S PUBLIC SERVICE BROADCASTER)
Office of the Superintending Engineer (Training)
Civil Construction Wing : All India Radio,
1st Floor, Sreechandra Bhawan, CGO Complex,
Lodhi Road, New Delhi - 110 003.
Ph: 24322606, 24322651 Fax: 243244258
e-mail: estrainingcw@yahoo.com.in

No. 1027/KEI/Demat/2014-15/565
M/s KEI Industries,
D-90, Ogla Industrial Area, Phase-I,
New Delhi-110020.

Dated: 28.05.2014

Subject:- Approval for " M/s KEI Industries, manufacturer of Wires from 0.5 sq. mm to 220 KV cable.

Sir,

M/s KEI Industries, New Delhi-20 has approached the Superintending Engineer (Trg.), CCW, AIR, New Delhi for approval of their products for use in the works being executed by CCW, AIR. Based on successful demonstration of their products and very informative presentation before Sr. Officers of CCW (SE/EE/As/As) on 21.05.2014 in CCW Training Institute, the following products of M/s. KEI Industries, New Delhi, have been recommended for approval:-

Sl.No.	Description of items	Brand of products	Referenced to standards
1	HT Cableless EHV Cables (upto 220 KV), LT Cables, Instrumentation Cables, Rubber Cables & PVC House Wires & Flexible Cables.	KEI	IS : 694 : 1990 IS : 1554 (Part-I & II) IS : 7098 (Part-I & II) IS : 9560 IS : 14494 IS : 6784

Provisional approval is hereby accordingly conveyed for the above products for use in various works of Civil Const. Wing : All India Radio for a period of 2 years from the date of issue of this letter with the following terms & conditions :-

1. It should be ensured that the products should conform to relevant IS/BS/CPWD specifications. Change, if any should be got approved by competent authority, failing which the approval is liable to be cancelled.
2. The approval does not absolve the Executive/Supervisory staff from their responsibility for using correct quality products. It is only after they are satisfied about the quality and the performance, the products shall be used. Mandatory checks about the quality shall be carried out as per norms and the records of the same shall be maintained, as per usual practice in Govt. works.
3. The products shall be used only after satisfying various aspects viz-a viz codes/ manufacturer's specifications/Sound Engineering Practices.
4. Further, continuation of the approval of the products will be decided on the basis of the mandatory feedback / performance report submitted by Superintending Engineers (IE), in case anyone using the products notices any defect/discrepancy, the same shall be reported immediately to the respective Superintending Engineer without waiting for the expiry of the period of two years.
5. As nominated details of the required products e.g. drawings, samples, pricing etc. are available at the address given below:-

M/s KEI Industries,
D-90, Ogla Industrial Area, Phase-I,
New Delhi-110020.

Telephone No. 091-11-26818840, 26818542
Fax No. 0091 - 11- 26811550, 26817225
e-mail : mumbai@kei-india.com
info@kei-india.com

6. Civil Construction Wing : All India Radio reserves the right to withdraw the approval at any time without assigning any reason.

This issues with the approval of competent authority.

(R.K.Dua)
Executive Engineer (Trg.)

Copy to:-

1. PS to CE, for favour of information of CE please.
2. SE/CE, CCW, AIR, Delhi/Kolkata/Nagpur for information and necessary action at their respective end please.
3. SSW-II SSW-III CCW, AIR for information and necessary action at their end please.

Executive Engineer (Trg.)



नवीकान्त गोयल
महानियंत्रक (परियोजनाएं)
N. K. GOYAL
General Manager (Projects)

Date: 15th November 08

Sub: Acceptance of KEI makes cable for use in BSL expansion programme

- Ref: 1 Your letter no. KEI/KOL/AS/06/2008/BSLP/KG/APP/2509 dated 25.09.08
2. BSL Email to MECON, dated 10.11.08
3. Mecon Email to BSL, dated 12.11.08

This has reference to your letter regarding approval of additional vendor for supply of HT/LT Cables in Expansion programme of BSL.

BSL/MECON have examined your request. As KEI is the registered with MECON & accepted by SAIL (ISP) also, it is to inform you that KEI is accepted by BSL as additional vendor for supply of HT/LT Cables for projects in expansion programme.

Thanking you.

(N.K.Goyal)
GM (P) Elect. & Mills

To,
Alok Saha
DCM (Marketing)
KEI Industries Ltd.
Kolkata

स्टील ऑथोरिटी ऑफ इण्डिया लि. बोकारो स्टील प्लांट, बोकारो स्टील सिटी - 827001, झारखण्ड, भारत
Steel Authority of India Limited, Bokaro Steel Plant, Bokaro Steel City - 827001, Jharkhand, India
दूरभाष : कालिका (06542) 240026 (ई. एन. टी.) / 80371 (फैक्स) (बोकारो) 06542-277893 (ई. एन. टी.) / 6860 (फैक्स)
Phone : Office (06542) 240026 (P&T), 80371 (Max), (Res.) 06542-277893 (P&T), 6860 (Max)
E-mail : nkgoyal123bokaro@yahoo.co.in
(Fax) 06542-240163

THE DURGAPUR PROJECTS LTD.



(A Government of West Bengal Undertaking)
Office of the Sr. Manager (C & D), Durgapur - 713202.
Regd. Office: Administrative Building, Durgapur-713201, Tata Fax: 0343-2556788, 2558251, 2555052

Ref. No. DPL/CD/503

Dated 22-06-2005

F A X

To
M/s. KEI Industries Ltd.,
2/1, Kalibari Lane, Jadavpur,
Kolkata - 700 032.

ATTN: MR. ALOKE SAHA
C. M. MKTA
Fax No: 033-2221-2629

Sub: L.T. Power and Control Cables.

Dear Sirs,

We have gone through your Co's Profile where several documents pertaining to manufacture of L.T. Power and Control Cables serves the credibility of enlistment of "KEI" make Cables in our Vendors' List. We have approved KEI as approved vendor.

Thanking you,

Yours faithfully,
(S. S. Kar)
Sr. Manager (Elect.), C&D, DPL.

Kolkata Office: 1, Shakespear Sarani, Kolkata - 700 071. Tele Fax: 033-22823492



AVANT-GARDE ENGINEERS AND CONSULTANTS (P) LTD.

REGD. OFFICE: 68A PORUR KUNDRAHUR HIGH ROAD, PORUR CHENNAI-600 016
TEL: 91-44-4827843, 4828532, 4828717, 18, 19, 20. FAX: 91-44-4828531
Email: avantgrade@vsnl.com Web Site: http://www.avantgrade-india.com

SSN/PORTAL/58341

M/s. KEI Industries Limited,
D-90, Okhla Industrial Area,
NEW DELHI - 110 020.

Kind Attn.: Mr. S.K. Chadha,
GM - Marketing.

Dear Sir,

Subject: Registering with AGEC as approved vendor.
Ref: Your Application for Enlistment for Vendors.

We are pleased to inform you that your application for enlistment of vendor had been processed and found acceptable. We declare that You are one of our Approved Vendors and we register you in our list of vendors at our web site, www.avantgrade-india.com

Presently your approval is for

1. Design, Manufacture and Supply of 3.3/1.1 kV Grade XLPE/PVC power, Control, Instrumentation, Signal & Thermocouple extension cables.

Enquiries will be sent after Client's approval, for various jobs to start with

For AVANT-GARDE ENGINEERS & CONSULTANTS (P) LTD.

(S. Sridharan) J. MURALEEDHARAN
General Manager - QA & C
AVANT - GARDE ENGINEERS AND
CONSULTANTS (P) LTD.
68-A, Kundrathur High Road,
PORUR, CHENNAI-600 116.



Division IV(O&M), Vidhyut Bhavan, 3rd Floor,
Aqum-Margao-Goa

Tel/Fax: 0832-2735496 E-mail: eeivgoa@gmail.com
No. EE-IV/O&M/Tech-Tender 05(11)/6759/11-12 Dated: 23/12/2011.
By Regd AD / Hand delivery

ORDER

To,
M/s KEI Industries Ltd.,
101/102/103, Vastu Shilp, Vastu Enclave,
Andheri Pump House, Fijamata Road,
Andheri(E), Mumbai - 400 093.

Name of work:- Supply of 40 Kms of 33 KV(E), 3C, 400 sq.mm. armoured, Aluminium XLPE Cable Type A2XWY for Elect. Dept., Govt. of Goa, Division IV, Margao, Goa.

Ref:- (i) Our letter of acceptance bearing ref No. EE-IV/O&M/Tech Tender 05(11)/6692/11-12 dtd 20.12.11.
(ii) Performance guarantee submitted vide letter dtd. 23/12/2011

Sir,

In continuation to our letter of acceptance referred above, you are requested to supply 40Kms of 33KV, 3 core, 400 sq.mm. armoured Aluminium XLPE cable type A2XWY to the Sub-Divisional Engineer, Sub-Division-VI (O&M), Margao as per the schedule stated in the N.I.T by 09/07/2012.

You are also requested to attend this office to complete formal agreement within 15 days from date of issue of this letter.

Yours faithfully,

(Peter Fernandes)

Executive Engineer-IV, O&M, Margao
For and on behalf of Governor of Goa



The West Bengal Power Development Corporation Limited

(A Government of West Bengal Undertaking)
Registered & Corporate Office:
New Secretariat Buildings
1, Karm Sansar Key Road, D Block, 6th Floor, Kolkata - 700 001
Ph: 2248-2217 (MD), 2213-1294 ED (Corp), 2248-6439 ED (Tech), 2248-2912
Fax: 2248-0944, 2248-2024, 2243-0523, Fax: (033) 2248-5436, 2210-3599
Internet Email: wbpdcl@wbpdcl.org, wbpdcl@wbpdcl.org

Ref. No: PDC/Corp/SMPI/Vendor/

Date: 08.12.2005

M/s. BHEL,
Project Management Group,
15th floor, Hindustan Times House,
Kasturba Gandhi Marg,
New Delhi - 110 001.

Attn: Mr. S. S. Singh, AGM (PMG)

Sub: Approval of vendor for Bought Out Electrical Items for Santaldih Thermal Power Station Extn. Unit - 5 (1x250 MW)

Ref: BHEL Letter no. 1) SMPS-EDT-WC-PE-0207 dated 30.11.2005

Dear Sir,

With reference to the letter no. SMPS-BDT-WC-PE-0207 dated 30.11.2005 of Mr. D. Grover, SDGM (PSG), BHEL, we hereby accord our approval in line with decision arrived in the high level meeting held at New Delhi on 01.10.2005 in respect of different additional Sub Vendor for the following package as detailed below: -

Sl. no.	Package	Name of Vendor Approved by WBPDCL
1.	LT XLPE FRLS Power Cables	- M/s Industrial Cables (India) Ltd. - M/s Hindustan Vidyut Products Ltd. - M/s KEI Industries Ltd.

You are requested to please take further necessary action from your end.

Thanking you,

Yours faithfully,

(N. Saha)
Executive Director(Tech)

Memo No: PDC/Corp/SMPI/Vendor/

Date: 08.12.2005

Copy to:

- The General Manager, STPS, WBPDCL, Purulia, WB.
- Mr. S. S. Samanta, Dy. General Manager, Corporate, WBPDCL, Kolkata-1.
- Mr. B. Ghosh, Project Manager- STPP, DCPL, 24B Park Street, Kolkata-16.
- Mr. D. Grover, Sr. DGM (PSG), PEM, BHEL, BHEL House, Siri Fort, New Delhi-110049

Executive Director (Technical)

Santaldih Thermal Power Station 26-2084 6205, DGM (O) - 2684 6447, 30(MIN)-2084 5403, Senior Manager (PS&A) - 2684 5086, Senior Manager - 2684 5083, Joint House - 2684 5301, Fax: 2684 6151	Kolkata Thermal Power Station GM-26227, Senior Manager (PS&A)-26228, Senior Manager (PS&A) - 26224-1, Electrical Control Room - 360123, Guest House - 260342/260123, Fax - 260217, STD Code - 3251	Kolkata Thermal Power Station Ph: GM-231116, DGM(O)-231254, DGM(M)-231226, DGM(S)-231253, DGM(Anc)-231226, Senior Manager (PS&A)-231205, Senior Manager (PS&A)-231205, Electrical Control Room - 231256, Guest House-231252, STD Code - 03228, Fax - 231280, Email: kolkata@wbpdcl.org	Bokaro Thermal Power Project GM-220381, DGM(Cons)-220210, Senior Manager (PS&A/PS&A)-220202, Guest House (Bokaro)-221975/221944, Fax: 220694, Fax - 220214, Email: bokaro@wbpdcl.org , STD Code - 23462
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Santaldih Thermal Power Project
Central Manager - 283555, STD Code - 09493



Maharashtra State Electricity Distribution Co. Ltd.
APDRP Section "Prakashgad" 5th Floor, Bandra (East)
Mumbai - 400 051.
Tel. : (0) 26474211
Fax : (022) 26472868. E-Mail: ce_apdrp@yahoo.com
Website: www.mahadiscom.in

o.CE/APDRP/30050

Date: 02-09-2006

0

he Chief Engineer,
I.S.E.D.C.L., Amravati Zone, Akola/Aurangabad Zone, Aurangabad/
olhapur Zone, Kolhapur/Nagpur Zone, Nagpur/Nagpur Urban Zone,
agpur/Nasik Zone, Nasik/Pune Zone, Pune/Konkan Zone, Ratnagiri/
eed Zone, Latur/Bhandup Urban Zone, Bhandup/Kalyan Zone, Kalyan.

**Sub: Inclusion of name M/s. KEI Industries Ltd.,
Mumbai approved Vendor for supply of 11 kV,
22 kV, 33 kV XLPE Cables.**

The Competent authority has approved to include the name
M/s. KEI Industries Ltd., Mumbai in Vendor list of APDRP for supply of
11 kV, 22 kV, 33 kV XLPE Cables.

Chief Engineer (APDRP)



मेकॉन लिमिटेड (भारत सरकार का संस्थान)
MECON LIMITED (A GOVERNMENT OF INDIA ENTERPRISE)



प्रीति संस्थान (Head Office) : प्लॉट-2, ब्राह्मपुर, रांची-2, Jharkhand, India, पिन/Phone : 0651-2483000, फैक्स : 0651-2482189/2482214
ई-मेल : ranchi@meconlimited.co.in, वेबसाइट : http://www.meconlimited.co.in

Ref.No.11.74.9181/CVDC/39/K-18/V-1041

Date: 15-OCT-14

✓ KEI INDUSTRIES LTD
33, Dr Sundari Mohan Avenue (1st floor)
Near Park Circus Ladies Park
KOLKATA 700014
Tel: 033 2286696/72241 7228 0983085169

Sub : Vendor Registration with MECON (Vendor code: V-1041)

Ref: Your letter No. KEI/KOLMECON/SM/12-13 dated 07-JUL-12

Dear Sirs,

Kindly refer to your above mentioned letter. We are pleased to inform you that your company (BHIWADI works) is enlisted in our Approved Vendor List for the following, which is now valid till 06-FEB-17. This supercedes our earlier letter of even no dated 03/03/2014.

ELECTRICAL INSTRUMENTATION, TELECOM & SIGNALLING EQUIP. POWER DISTRIBUTION/SHOP ELECTRICS (CABLE & CABLES)

1. CABLE - EHT POWER CABLE (Upto 132 KV) - MANUFACTURER
2. CABLE - FLEXIBLE CABLE (As per IS 9968 Part 1 & Part 2 upto 6.6 KV, IS-14494 (Applied))
3. CABLE - HT POWER CABLE (Upto 66 KV) (Applied)
4. CABLE - INSTRUMENTATION/SCREENED/SIGNAL
5. CABLE - LT CONTROL CABLE
6. CABLE - LT POWER CABLE
7. CABLE - TELECOMMUNICATION (INCLUDING JELLY FILLED)
8. WIRES - DOMESTIC WIRES

ERECTION CONTRACTORS (POWER DISTRIBUTION)

Please note that this enlistment is subject to satisfactory execution of orders in delivery and quality of above mentioned items when ordered for various projects.

Further it may please be noted that any change in the product, location of works/sales office, Management/Organisation structure etc. shall be intimated to us promptly along with relevant document for our necessary action, failing which our enquiries may not reach you and also your enlistment with us will be liable to be cancelled. Kindly keep sending your annual report every year. Your performance shall be periodically reviewed by us for continuation of your enlistment with MECON.

The above enlistment does not necessarily confirm issue of tender enquiries, which is at the sole discretion of MECON/MECON's client. It is your responsibility to apply for renewal of your registration at least 2 months in advance of expiry of this validity period.

Thanking you.

Yours faithfully
For MECON LIMITED

Anjali Gang, DOM (VDC)
email: anjalgang@meconlimited.co.in
Fax: 0951-248 2189 Tel: 0651-248 3394

Major Offices:

नई दिल्ली/New Delhi +91-11-2204 1201 (Phone) +91-11-2204 1214 (Fax) delhi@meconlimited.co.in	मुंबई/Mumbai +91-22-2781 2155-58 (Phone) +91-22-2781 2273 (Fax) mumbai@meconlimited.co.in	कोलकाता/Kolkata +91-33-2282 2351-52 (Phone) +91-33-2282 4441 (Fax) kolkata@meconlimited.co.in	चेन्नई/Chennai +91-44-2626 1911 (Phone) +91-44-2626 1474 (Fax) chennai@meconlimited.co.in	बंगलूरु/Bangalore +91-80-2657 1651-63 (Phone) +91-80-2657 5352 (Fax) bangalore@meconlimited.co.in
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Tele: 23018582

Dy Dir Gen of Works (Design)
Engineer-in-Chief's Branch
Army HQ, Kashmir House
DHQ PO, New Delhi-110 011

11593/ISI/64/E2 Des-1

12 Nov 2003

M/S KEI Industries Limited,
3-90 Okhla Industrial Area, Phase-I,
New Delhi-110 020

**USE OF ISI MARKED "KEI" BRAND
ELECTRICAL CABLES IN DEFENCE WORKS**

1. Please refer your letter No. KEI/433K/03/MES/02 dated 06 Nov 03 and earlier correspondence on the subject.
2. Your firm had applied for use of "KEI" brand following types electrical cables in Defence Works:-

(a) PVC insulated (Heavy Duty) Electric cables for working voltages up to and including 1100 V, Insulation type A & C, Sheath type ST 1 & ST 2 armoured & unarmoured with copper & aluminium conductor including cables for low temperature applications excluding cables for use in mines, as per IS: 1554 (Part-1)-1988.

(b) PVC insulated cables, single/multicore, sheathed and unsheathed, for working voltages up to and including 1100V, with copper & aluminium conductors including cables for outdoor and/or low temperature applications, as per IS: 694-1990.

(c) XLPE insulated PVC sheathed cable for working voltages up to and including 1100 V, with aluminium conductor armoured/unarmoured including cable for low temperature conditions cat 01 but excluding cables for use in mines, as per IS: 7098 (Pt-1)-1988.

(d) PVC insulated (HD) cables for working voltages up to 3.3 KV, with aluminium/copper conductors sheathed, armoured & unarmoured including cables for use in mines and excluding low temperature conditions, Insulation Type -A and Sheath Type ST-1, as per IS 1554 (Part-2)- 1988.

3. It is seen that all above-mentioned products are BIS approved & ISI marked and the firm is ISO 9001:2000 Certified Company. Hence these products can be incorporated in Defence Works, on merits.

4. You may approach Zonal CEs / lower formations with your literature/price list accordingly.

निदेशक (रोडवर्क)
Director (Roadwork)
सिस्टम निदेशक
Director of Design
सिस्टम निदेशक
Director of Design
सिस्टम निदेशक
Director of Design

(R N Malhotra)
Col
Offg DDGW (Des)
for E-in-C

Copy to:-

- Chief Engineer
 - HQ Northern Comd
 - HQ Western Comd
 - HQ Central Comd
 - HQ Eastern Comd
 - HQ Southern Comd
- For kind information and necessary action please.

All Chief Engineers Zone- For information and necessary action please.

Telephone: 25094481 Extn 44123

Controllate of Procurement
Material Organisation
Ghatkopar West
Mumbai 400 086

Date: 29 Aug 03

MOPRVA/DEQA/COM

M/s. KEI INDUSTRIES LTD
Vastu Enclave, Vastu Ship,
101-102, Andheri Pump House,
Andheri (E)
MUMBAI-400 093
8/E

VENDORS REGISTRATION

1. Your request for registration with the Navy has been scrutinised and has been considered. It is however, observed that you are not registered with the Director, Directorate of Quality Assurance (Navy), West Block No.5, R.K.Puram Road, New Delhi 110 011.

2. Registration with DGQA(Navy), Delhi is mandatory for supply of items to MO(MB). Therefore, you may kindly take up the matter with DGQA(Navy), New Delhi and obtain registration. In the meanwhile, if there is any Tender Enquiry, tenders will be sent to you as and when requirement arises.

Yours faithfully,

Signature
C.D. Bhatnagar
INSO II
ACPRO CMB
E.CPRO CMB



GUJARAT INDUSTRIES POWER COMPANY LTD.

Slpp/Mat

Fax & Courier

15 December 2009

To,
M/S THE SINGHARENI COLLIERIES COMPANY LIMITED
CORPORATE PURCHASE DEPARTMENT,
P.O. KOTAGUDEM COLLIERIES-507101
KHAMMAM DISTRICT (A.P.)

Dear Sir,

REF YOUR LETTER CRP/PD/06/3580/T. NO. C060900174 DATED 30.11.2009

M/s KEI INDUSTRIES LIMITED is proven supplier for flexible trailing cable. They are supplying various cables to us.

Thanking you,

Yours faithfully,
For Gujarat Industries Power Company Limited

(S. P. S. A.)
MANAGER (MATERIALS)

Registered Office & Vadodra Plant :
PO. Panchsheel, Dist. Vadodra 391 341 Gujarat - INDIA
Phone : FARB (0261) 222218/221310/191 Fax : 2221207
E-mail : jpb@india-ppco.com



Surat Lignite Power Plant :
Village : New Navli, T. Mangal, Dist. Surat 394 110 Gujarat-INDIA
Phone : FARB (0261) 252106/1063 to 261072 Fax : 261 073/74
E-mail : gpr@india-ppco.com

ABB

04th February 2008

TO WHOMSOEVER IT MAY CONCERN

THIS IS TO CERTIFY THAT M/s KEI INDUSTRIES LIMITED HAS SUPPLIED THE FOLLOWING CABLES FOR M/s FOXCONN PROJECT AGAINST OUR PO # 40004389 DT. 03RD MAY 2007 & AMENDMENTS THEREOF.

- (1) 11KV(E) GRADE COPPER CONDUCTOR AS PER IS:7098/P2/85 3C x 300 SQ.MM -1410 mtrs & 3C x 400 SQ.MM - 920 mtrs.
- (2) 11KV GRADE XLPE INSULATED COPPER CONDUCTOR - 65KMS OF ASSORTED SIZES.

THE CABLE SUPPLIES HAVE BEEN SATISFACTORY AND SUPPLIED TO US AS PER CONTRACTUAL DELIVERY DATES.

BOTH THE HT & LT CABLES HAVE BEEN COMMISSIONED AND THE PERFORMANCE OF THE SAME ARE FOUND SATISFACTORY.

Yours truly,
For ABB Limited



ABB LIMITED
BUILDING SYSTEMS
CENTURY PLAZA
7th Floor, 561-562, Mount Road,
Chennai - 600 018.

POWER GRID CORPORATION OF INDIA LIMITED (A Government of India Enterprise)

संस्थान कार्यालय : "सौदामिनी" प्लॉट नं. 2, सेक्टर-29, गुरुगोबिन्द 122 001, हरियाणा
फोन : 2571700 - 719, फैक्स : 2571760, 2571761 एवं "नेटग्रिड"
Corporate Office : "Saudamini" Plot No. 2, Sector-29, Gurgaon-122 001, Haryana
Tel. : 2571700 - 719. Fax : 2571760, 2571761 Gram : "NATGRID"

Ref: C/QA&I/VA/Instrumentation Cable

Date: 20.06.2011

M/s. KEI Limited,
D-90, Okhla Industrial Area,
Phase-I, New Delhi-110020.

Kind Attention: Shri. K. Sharma
Subject: Approval of Supplying Instrumentation Cable for POWERGRID Projects.

This has reference to your submission of documents for the subject matter. Based on the review of documents submitted by you we are agreeable to your request for supplying Instrumentation Cables from your works situated at SP-919,920,922 RIICO Industrial Area, Phase-III, Bhiwadi, Dist. Alwar, Rajasthan-301019. However, following have to be ensured by you.

- 1) Traceability should be maintained from raw material stage to the final stage.
- 2) Raw Material procured should be from POWERGRID approved sources.

Please note that item sourced from them meets the requirement of POWERGRID technical specification, approved drawing/data sheet including type testing, if any. In case of any abnormality in this regard is observed, we reserve the right to withdraw this approval with immediate effect.

This however does not absolve you of liabilities as per contract.

Thanking you,

Yours truly,

(Mahendra Saxena)
CM(QA & I)

CC: CM (IO - Gurgaon)



GOVERNMENT OF INDIA
MINISTRY OF DEFENCE

DIRECTORATE GENERAL OF QUALITY ASSURANCE DIRECTORATE OF QUALITY ASSURANCE (NAVAL)

CERTIFICATE OF RENEWAL OF REGISTRATION/ REGISTRATION FOR ADDITIONAL ITEM

Reference No. 65/2011-29/DQAN-PI dated 27 Dec 2008

Registration Certificate Serial No. DQAN/29/2001

Valid upto 08-12-2011

The registration is accorded to M/s KEI Industries Ltd. New Delhi

for Registration Certificate mentioned above for manufacture supply of the following items to Defence Establishments renewed for a further period of 03 years.

S. No.	Description	Part No./D.S. Cat. No.	Specification
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94 Items as per enclosure I attached.

No. of items for which registration is renewed - three

No. of additional items for which vendor is now registered - One

Ministry (upto) - R. K. K. K. K.

Registration No. & issuing of Vendor K-29 (MS-PI) code - L dated 10-12-2008

This Certificate of renewal of registration is valid upto 08-12-2011.

(Signature)
Captain P.V.
Director

Dated 15 Feb 2011

Directorate of Quality Assurance (Naval)



BHARAT HEAVY ELECTRICALS LIMITED
(A GOVERNMENT OF INDIA UNDERTAKING)



Date: 05/02/2008.

To Whom It May Concern

This is to certify that KEI Industries Limited has supplied 11 KV (E) grade 3 core x 240 sq. mm copper Cable against PO No.4500002757 dt. 20/02/2007.

Quantity 4.00 KM vide KEI's invoice no 72000791/72000848

The delivery and quality assurance of the Cables are found to be satisfactory.

[Signature]

A.P. CHAKRABORTY
(Chief Manager Projects)
Narmada Refinery Ltd.
P.O. Narmadagarh, Dist Golaghat,
Assam.

CC to: Mr. Alok Saha.

Dy. General Manager - Eastern India.
KEI Industries Limited.
2/1 Kalibari Lane, Flat#1
Jadavpur, Kolkata - 700 032.
West Bengal.

CC to: Mr. Kaushik Moitra
KEI Industries Limited.
Regional Sales Executive - North East
Guwahati -

For supply to Refinery Office
Narmada Refinery Complex, Dist., Dibrugarh, Assam, Pin - 786 001, Fax - 0379-255014, BPHAR - 0379-260-083/084/411.
Commercial Dept. : Phone - 0379-255049/255051/255053 Fax - 0379-255014 Email - comreg@kei.co.in

INTER OFFICE
a Tower, G.S. Road,
ahmed - 781 005
no. (0361) 2250270
fax: (0361) 2250281
e-mail: info@kei.co.in

COORDINATION OFFICE
Tolly House, 8th Floor, 15-17, Tolly Marg
New Delhi - 110 001 (India)
Phone: (011) 3726411, 3743962
Telex: 3736412
E-mail: narmadagarh@kei.co.in

KOLKATA OFFICE
Gandhar House, 8-Block, 1st Floor,
9, Naraj Subhas Road, Kolkata - 700 001
Phone: (033) 2212676/2212362 (2)
Telex: (033) 221 2361
E-mail: info@kei.co.in

Bharat Heavy Electricals Limited
(A Govt. of India Undertaking)

Project Engineering
Management



Date: 09.07.2012

Ref:

To

M/s KEI INDUSTRIES LTD.
D-90, OKHLA INDUSTRIAL AREA, PHASE-I,
NEW DELHI 110020

Kind Attn: Mr. Gaurav Shanker Mathur (Asst. Manager-Marketing)

With reference to your request received vide e-mail dated 28.06.2012 for re-issuance of registration certificate, it may please be noted that M/s KEI INDUSTRIES LTD. with their registered office at D-90, OKHLA INDUSTRIAL AREA, PHASE-I, NEW DELHI 110020 and works at SP-919/920 RIICO Industrial Area, Phase-II, Bhiwadi, Dist Alwar- 301019, Rajasthan and A-280/281/282/283/284 RIICO Industrial Area, Chopanki, Dist Alwar- 301019, Rajasthan is PEM registered vendor under Permanent Category having Vendor Code K027 for following packages:

- HT XLPE CABLES
- LT XLPE POWER CABLE
- LT PVC POWER CABLE
- LT PVC CONTROL CABLE
- SCREENED CONTROL CABLES
- LT XLPE CONTROL CABLE
- LT HRPVC POWER CABLES
- LT HRPVC CONTROL CABLES
- LT FIRE SURVIVAL CABLES
- BARE GROUND CONDUCTOR FOR BELOW GRD EARTHING
- BARE GROUND CONDUCTOR FOR ABOVE GRD EARTHING

The registered vendor has to comply vendor registration requirement as per BHEL policies and guidelines.

The above registration has the approval of the competent authority.

Thanking you,
For & on behalf of BHEL

[Signature]
09/07/12
(Manisha Gupta)
Sr. Engineer/ VD

[Signature]
09/07/2012
श्रीमती कपूर, प्रबंधिका, प्रमुख, नर्मदा रिफाइनरी लिमिटेड, नर्मदा रिफाइनरी कॉम्प्लेक्स, डिस्ट. दिब्रुगढ़, असम, पिन - 786 001, फोन - 0379-255014, BPHAR - 0379-260-083/084/411, कॉमर्शियल डिप्ट. : फोन - 0379-255049/255051/255053, फैक्स - 0379-255014, ईमेल - comreg@kei.co.in

BHEL / PEM
Power Project Engineering Institute,
BHEL & PES Complex,
Plot No. 25, SECTOR - IIA,
Noida - 201 301 (UP) INDIA

Phone: +91-120-4368794
Fax: +91-120-4329226

Regd. Office:
BHEL House
San Feet
New Delhi - 110 001,
INDIA

Telex: 25673339

Headquarters
Chief Engineer (AF) WAC
Pin Code - 900838
C/O 56 APO

40048/ 44 /E4

15 Jan 2008

CWE(AF) Chandigarh
CWE(AF) Ambala
CWE(AF) Bikaner
CWE(AF) Palam
GE (I) AF Gurgaon

APPROVAL OF PRODUCT

- M/S KEI INDUSTRIES LIMITED D-90, OKHLA INDUSTRIAL AREA, PHASE-I NEW DELHI-110020 has been approved of their Products KEI Brand manufacturer of POWER, CONTROL, INSTRUMENTATION, FRLS and ABC cables of various sizes up to 66KV by Chief Engineer for use of their product on trial basis.
- You may use of this Product in your area on trial basis.
- The feed back of their Performance report of the product should be intimated to this HQ for further incorporation of product in our area
- The should be disseminated up to GE level.
- The approval does not absolve the executive/supervisory staff from their responsibility for using correct quality product. It is only after they are satisfied about the Quality and ne performance, the product will be used. Mandatory checks about the quality will be carried out as laid down and the record of the same maintained.

[Signature]
(A K Gupta)
SE
Dir E/M
for Chief Engineer
for Chief Engineer (AF) WAC
for Chief Engineer (AF) WAC

Copy to -

M/S KEI INDUSTRIES LIMITED
D-90, OKHLA INDUSTRIAL AREA,
PHASE-I NEW DELHI-110020

Tele: 011-2681840, 2681642
26815556, 26815559.

Ref your letter No Nil dt 14 Dec 2007
You are requested to contact the various
CWE's/GE under our area for uses of
your product in Defense works



ANSAL BUILDWELL LTD.
(AN ISO 9001:2000 CERTIFIED COMPANY)

8220 CFF 818 Upper East Road, Pocket 2, 7, Tollymore Park, New Delhi - 110 001
Ph: 33303601, 23303602, Fax: 91 233 0609, 23303607
E-Mail: ansalbuildwell@ansal.com, info@ansalbuildwell.com, Website: www.ansalbuildwell.com



REF -ABL-2006

Date : 25th April, 2006

M/S KEI INDUSTRIES LTD
D-90, OKHLA INDUSTRIAL AREA
PHASE - I,
NEW DELHI - 110020.

KIND ATTENTION : MR KAPIL KUMAR PURI

Subj:- Approval For Cables and Wires of KEI Brand

Dear Sir,

Based on the documentation and personal interview the following makes as approved for use of our on going works and future projects.

- HT cable upto 33KV
- Low tension Copper/Aluminium Conductor PVC & XLPE Power Cables
- Low Tension PVC & XLPE Control Cables.
- Flexible & House Wires (Single & Multicores)
- Fire Survival Zero Halogen Cables.
- FRLS/FRTR/UFRL/UFRL/DPE-Power Control & Instrumentation Cables.

Thanking you,

Yours faithfully
FOR ANSAL BUILDWELL LTD

[Signature]
(R RAJAGOPALAN)
GENERAL MANAGER (Services)

CC : Commercial Department



JSW Steel Limited
Salem Works
P. O. Postaneri, Mecheri
Mettur - Tl. Salem - Dt - 636 453
Tamil Nadu, India.
Phone : 04258 278400
Fax : 04258 278618
Website : www.jsw.in

Date: 17th March 2009

TO WHOMSOEVER IT MAY CONCERN

This is to certify that M/s. KEI INDUSTRIES LIMITED have supplied the following HT cables for our project against PO No. 06/6/72/900086 dtd 21/04/06

Sl.No	Item Description	Qty (Mtrs)
1	1C x 400 sq.mm, 11kV (UE) XLPE	21000
2	3C x 240 sq.mm, 11kV (UE) XLPE	16000
3	3C x 185 sq.mm, 11kV (UE) XLPE	3500
4	3C x 240 sq.mm, 3.3kV (UE) XLPE	2200
5	3C x 120 sq.mm, 3.3kV (UE) XLPE	750
6	3C x 95 sq.mm, 3.3kV (UE) XLPE	1500
7	3C x 70 sq.mm, 3.3kV (UE) XLPE	1000

The above cables have been charged and commissioned for more than two years now and are in satisfactory operation.


K Kannan
Associate Vice President (Engg & projects)
JSW STEEL LIMITED., Salem Works



Regd. Office : Jindal Mansion,
5A, Dr. G. Deshmukh Marg,
Mumbai - 400 026
Phone : 022-2351 1000
Fax : 022-2352 6400



झारखंड राज्य विद्युत् बोर्ड
Jharkhand State Electricity Board

N.O. 191 DT. 8/9/2008

TO WHOM IT MAY CONCERN

This is to certify that JSEB have placed P.O. No. 15 dated 12.04.08 on M/s KEI, Kolkata for supply of 10.5 Kms 6.6/11 KV(E) Grade armoured XLPE FRLS, Aluminum conductor HT Power Cable of various sizes worth Rs 2.18 crores including taxes and freight for Patratu TPS.

Firm have delivered the material within stipulated period and quality of the materials are found satisfactory after site inspection.


(R.K. Choudhary)
Chief Engineer (Generation)



J.K. Electric Contractor
(A' Class Govt. Contractor & Order Suppliers)
Licence No. 974/A' Dt. 1981 • TIN No. 08211751207 • RET/145/TIN-1490

Ref. No. JKE/C.

Date: 200

M/s KEI Industries Limited
D-99, Okhla Ind. Area
Phase I, New Delhi.

Sub: Performance of KEI make 11KV-11KV-33KV XLPE cables.

Dear Sir,

Please find enclosed herewith the Performance certificate of cables received from Jaipur Development Authority, Jaipur for various works executed by us. Cables laid of various sizes are as under:

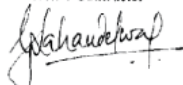
- (a) 3-core x 185sqmm XLPE 11KV Grade Alu. Arm. Cable - 17 kms
- (b) 3-core x 185sqmm XLPE 11KV Grade Alu. Arm. Cable - 12 kms
- (c) 3-core x 300sqmm XLPE 33KV Grade Alu. Arm. Cable - 29 kms.

The performance of the cables laid by us is satisfactory.

Thanking you,

Yours truly,

For J.K. Electric Contractor



Encl: As above

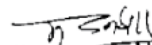
JAIPUR DEVELOPMENT AUTHORITY, JAIPUR

TO WHOM SO EVER IT MAY CONCERN

certified that M/s J.K. Electric Contractor, 158-159, Mahendwas house, ru Bazar, Jaipur are Electrical 'A' Class Contractor and registered in "E-I" in JDA, Jaipur had executed the work of:-

ie of work	Work Order No. & Date	Main Component of Work	Financial Year
of existing HT/LT Lines aying U/G Cables from am Marg to Ajmeri Gate onk Road, Jaipur.	49 1.02.05	L.T. Cable = 16652 Mtr. 11KV 3x185 Cable = 5683 Mtr.	2005-2006

em is working satisfactorily.


Zonal Engineer
Jaipur Development Authority
Jaipur

JAIPUR DEVELOPMENT AUTHORITY, JAIPUR

TO WHOM SO EVER IT MAY CONCERN

certified that M/s J.K. Electric Contractor, 158-159, Mahendwas house, Bazar, Jaipur are Electrical "A" Class Contractor and registered in "E-I" in JDA. Jaipur and executed the following quantities against Work Orders mentioned below:-

of work	Work Order No. & Date	Main Component of Work	Financial Year
on of 33 KV Charging for JDA Residential Scheme Nagar, Jaipur. (Phase-III)	379, 14.08.07	33KV XLPE Cable = 12218 Mtr. 33KV O.D Joint = 8 Nos. 33KV S.T Joint = 34 Nos.	2007-08.
on of 33 KV Double Circuit ng feeder from 132KV GSS Bansi A Scheme Kalpana Nagar, Jaipur	381, 14.08.07	33KV XLPE Cable = 10158 Mtr. 33KV O.D Joint = 4 Nos. 33KV S.T Joint = 12 Nos.	2007-08

Zonal Engineer (Electrical)
Jaipur Development Authority
Jaipur

Palmers Green International Ltd.



Box 3689
Accra, Ghana

+233 21 220 309 / +233 21 12 44
+233 21 22 66 52 / +233 21 24 79



Ref: PGI/PO/Z N 76349/2005/1283

Date: 26/03/2006

To,
M/s. KEI Industries Ltd.
101 - 102 Vastu Shilp
Vastu Enclave
Andheri (E), Mumbai
India - 400093

Attn: Mr. S Sharma

Sub: Supply of 25Km 1 x 630 33 KV Aluminium XLPE Cable for Ghana against PO Number PO/Z N 76349/2005 dated 06/10/2005

Dear Sir / Madam,

With reference to the above mentioned Purchase Order, we would like to inform you that we have received the full quantity of 25 KM at our warehouse.

The cables have since been despatched to the various sites and the tests conducted on them while installation have been found to be satisfactory and no problems have been cited or reported.

This letter has been issued upon the request of KEI Industries Ltd.

For Palmers Green International Ltd.

Albert Parry

Albert Parry
DMD - International Business

TO WHOM IT MAY CONCERN

This is to certify that we have used KEI make 33 KV (E) 630 sq. mm X 1 Core H.T. cable through M/s. Pradip Kumar Saha (Electrical Contractor) against C.A. No. CE(D)/ASEB/APDRP/CEC- Turnkey/06-07/20 dated 18.08.2007. Total Mtr, 1056.

We found KEI make cable satisfactory till now.

Thanks and Regards

P.C. Bhagabati
(P.C. Bhagabati)
S.D.O.
ASEB, FANCY BAZAR ELECTRICAL SUB DIVISION.

TO
Mr. Alok Saha
Dy. General Manager (Marketing)
KEI INDUSTRIES LIMITED,
2/1, KALIBARI LANE,
JADAVPUR, KOLKATA - 700032,
Phone: 033 24294773

CC to
Mr. Kaushik Mehta
KEI INDUSTRIES LIMITED,
Regional Sales Executive North East
Guwahati
Cell: 09954255137.



MAHARASHTRA STATE POWER GENERATION CO. LTD. (MAHAGENCO)

(Formerly Maharashtra State Electricity Board)

"Prakashgad", 2nd Floor, Bandra (East), Mumbai-400 051, India.

Tel. 26472131/26422211 Fax No. 26582627 Grams : COSGRID

Gr.IV/Misc/ 2 1 6 4 - -

Date: 15 FEB 20

WHOM SO EVER IT MAY CONCERN

is to certify that M/s. KEI Industries Ltd., Mumbai have executed orders SP/L-001 104/0207/13850 dtd. 13-09-2007 & SP/L-001/T-0406/0706 4502 dtd. 07-04-2007 office. M/s. KEI Industries Ltd., Mumbai have also registered in e-tendering process office for procurement of HT, LT XLPE/HRPVC/FRLS Control & Power Cables.

15/2/08
Superintending Engineer (St.Gen)
For Chief General Manager (Stores)

cc:iv:120

GOVERNMENT OF ASSAM
OFFICE OF THE CHIEF ENGINEER, P.W.D.(BUILDING), ASSAM
CHANDMARI, GUWAHATI-3

No. : CE/BLD/ELECT/15/93/pt-11/ 88
To : THE KEI INDUSTRIES LIMITED
33 DR. SUNDARI MOHAN AVENUE
1ST FLOOR KOLKATA-700014

Date : 14-12-2002

Sub : Approval of your electrical product

Ref. : Your letter No. KEI/KOL/ ASS/SM/09-10/0211 Dated : 2nd November 2009.

Dear Sir,

With reference to the above, I am to inform you that your following product has been provisionally approved for one year the date of issue of this letter. The approval will be cancelled at any time after receipt of complain against unsatisfactory performance of your products.

LIST OF MATERIALS

- PVC/XPLE Insulated Power cable up to 33 KV Grade as per 1554/7098
- PVC Flexible wires and cables as per IS 694.
- FRIS/FR/FS/ZHFR cables and winding wires.
- Submersible cables and winding wires.
- Armored PVC controlled cables as per IS: 1554(pt-1)-1988.
- 132 KV grade cables as per IS 7098 (pt-III).

The approval given above does not absolve APW/Engineers from their responsibility of exercising necessary checks in quality, rates and performance of the product while procuring and using the same.

Yours faithfully,

(Signature)
Addl. Chief Engineer, PWD (Elect.)
Chandmari, Guwahati-3

Memo No. : CE/BLD/ELECT/15/93/pt-11/ Copy to : 1) The Superintending Engineer, P.W.D. Guwahati Electrical Circle, Ghy -1 for information and necessary action.
2) The Executive Engineer, P.W.D. Guwahati/Jorhat/Tezpur/Kokrajhar Electrical Division for information and necessary action.
3) MR. ALOK SAHA General Manager (Mktg) KEI Industries Limited Kolkata for information and necessary action.

(Signature)
Addl. Chief Engineer, PWD (Elect.)
Assam, Chandmari, Guwahati-3

विद्युत निदेशक अ.अ. महोदय, चण्डीमारी

दिनांक : 28/01/2006

Date 24/09/2

TO WHOMEVER IT MAY CONCERN

to certify that we have used KEI Make 22kv (E)-3c x 185 Sqmm - 15 Km & 2 Km HT cables against PO No. 457/07 dt. 19/10/2007.

we charged the cables & performance of the cable found to be satisfactory till

(Signature)
Executive Engineer (Electrical)
Chinchwad Municipal Corporation
i-18, "C" Section Electrical Department,
Executive Engineer (E.)
C Ward,
Chinchwad Municipal Corp.

इस्टर्न कोयलफील्ड्स लिमिटेड
(कोयल निर्यात लिमिटेड का एक अंग)



Eastern Coalfields Limited
(A Subsidiary of Coal India Limited)

NOTING SHEET

विभाग DEPARTMENT Area Engineering (E&M)'s.

फाइल नं. File No.

समन्वित निदेशक Dealing Clerk

विषय Subject

Performance Report of PVC DWA Cable, 3 Core, 952 MM, 3.3 KV Grade drawn by Sodepur Area on dated 12-04-2004 & 07-05-2004 total length 506 Mtrs.

The above mentioned Cable was drawn by Sodepur Area during April'04 & May'04 and used in Partella/Patschona Colliery.

The Performance Report of the Cable as known from the user Engineers (E) of the Colliery are found to be satisfactory.

This is for kind information and needful.

(Signature)
By, CE (E&M)/AB (E&M), 16/12/07

(Signature)
Supt. Engineer (E&M),
Sodepur Area

General Manager,
Sodepur Area

Chief General Manager (E&M),
Sodepur Area

(Signature)
For your kind info. pl.
17/12

ABB

Dated : May 9, 2007

TO WHOMSOEVER IT MAY CONCERN

This is to certify that M/S KEI INDUSTRIES LIMITED Have supplied 22 KV HT UG XLPE cables in different sizes for Wipro Pune Phase IV Project. The cables supplied are laid & charged and the same is working satisfactorily.

(Signature)
Sudarshan S. Bhat
Project Manager

ABB Limited

Address: 20th Floor, Park Road, Bangalore
Telephone: +91 80 22946171
Fax: +91 80 22946172
Registered Office and Regional Office: 2nd Floor, Park Road, Bangalore
Telephone: +91 80 22946171
Fax: +91 80 22946172



KEI/01/10/08

Date: 02/07/08

TO WHOMSOEVER IT MAY CONCERN

This is to certify that M/s KEI Industries Ltd. has supplied the "KEI" Make Cable to us of below mention size for Various Projects of Jaipur Development Authority, Jaipur / Jaipur Vidut Vitran Nigan Limited, Jaipur.

1. 3 core 185 sq.mm 11 KV HT Cable (E) 35 km.
2. 3 core 300 sq.mm 11 KV HT cable (E) 15 km.
3. 3 core 300 sq.mm 33kv HT cable (E) 20 km

Further this is to certify that 80% of the above quantity has been laid and commissioned and handed over to concerned department. Performance of all the Cable found satisfactory.

For Oriental sales Corporation

Vikas Gupta
Managing Director

स्टील इन्डस्ट्री ऑफ इंडिया लि. - इस्को स्टील प्लांट
STEEL AUTHORITY OF INDIA LTD. - ISCO STEEL PLANT
(A Government of India Enterprise)
संयुक्त इण्डियन एंड विदेशी संयंत्र
आयुध - 502200 (विद्युत विभाग)
PLANT ENGINEERING & DEVELOPMENT DIVISION
BANGALURU-PN: 713325, (WEST BENGAL)
दिल्ली: (011) 2240000, 2240001
Telephone: (0341) 2240000, 2240001
Fax No: (0341) 2240000
E-mail: (E-mail) pdd.project@gmail.com

Ref. No: PEDD/CPL-20/2114

Date: 31.10.2008

To
M/s. Micon Ltd.,
Ranchi - 834002,
Jharkhand.

Fax No: 0651-2482189 / 2482214

Attn: Shri S. K. Bose, G. M. (T.S. - Project ISP).

Dear Sir,

**Re: 2.5 MTPA Expansion Programme of SAIL-Jharkhand
General Specification for Preferred makes (G-13)
Additional Electrical Vendors for Supply Item 6**

Please find enclosed herewith a list of additional preferred makes and corresponding equipment / material for inclusion in the LIST OF PREFERRED MAKES in the technical specification of auxiliary packages and other packages to be tendered in future in connection with the above project. These names may be included in those packages so where techno-commercial discussions are still in progress or yet to commence.

Yours faithfully,
For SAIL - II: 20 STEEL PLANT

Encl.: Annexure-I (One page)

(S. K. GUPTA)
DY. GENERAL MANAGER (PROJECTS)

c.c. Shri K.K. Mukherjee,
General Manager (Elect.),
MECON, Ranchi.
Fax No. 0651-2481669

With a copy of Annexure-I

c.c. Shri Neelkamal,
DOM (Elect.) Power T&D,
MECON Ltd., Ranchi.
Fax No.: 0651-2482189 / 2482214

(हस्ताक्षर): विकस गुप्ता, जी. एम. (टी.एस. - प्रोजेक्ट आईएसपी), इस्को स्टील प्लांट, बंगलूरु-713325, (पश्चिम बंगाल)।
दिल्ली: (011) 2240000, 2240001।
फैक्स नंबर: 0651-2482189, 2482214।
ईमेल: pdd.project@gmail.com



31st FEBRUARY, 2008

Enclosure to letter Ref. No Ref. No.: PEDD/CPL-20/
Date: 31.10.2008

Annexure-I

Sl. No.	Additional Name of Preferred Makes	Name of Equipment / Materials
1.	Andrew Yule & Co. Ltd.	3.3/6.6/11 KV Indoor VCB Switch board. Up to 15000 KVA 11 KV Class Distribution Transformers (ONAN)
2.	LSIS / CECO Electronics Pvt. Ltd. / Control Engg. Co.	LT Switch gear & Control gear and Panel. Static converter. Automation Panel. Digital Motor Protection Relay.
3.	YAMUNA Power and Infrastructure Ltd. (DENSON)	HT & LT cable Joining kits.
4.	Standard Electrical Ltd.	MCB Distribution board (SLDB). BLCB. Metal clad plug & sockets.
5.	KEI Industries Ltd.	LT Power & Control cables. (PVC / XLPE) 6.6 KV XLPE Cables (only for dry cast method).
6.	Steel Pole Corporation.	Steel tubular poles.
7.	Control Devices	MCC (Non-draw out), PDB, MLDB Relay Control Panel, Receptacle

(हस्ताक्षर): विकस गुप्ता, जी. एम. (टी.एस. - प्रोजेक्ट आईएसपी), इस्को स्टील प्लांट, बंगलूरु-713325, (पश्चिम बंगाल)।
दिल्ली: (011) 2240000, 2240001।
फैक्स नंबर: 0651-2482189, 2482214।
ईमेल: pdd.project@gmail.com

TO WHOMSOEVER IT MAY CONCERN

THIS IS TO CERTIFY THAT M/S KEI INDUSTRIES LIMITED HAS SUPPLIED THE FOLLOWING CABLES FOR M/S SITAPURAM POWER PROJECT AGAINST OUR PO NO. 590000012 DT. 24th JULY 2006.

6.6 KV (U/L) THREE CORE STANDARD ALUMINIUM CONDUCTOR, WITH EXTRUDED SEMI CONDUCTING COMPOUND IN COMBINATION WITH COPPER TAPL, EXTRUDED XLPE INSULATED WITH PVC INNER SHEATH, GI STRIP ARMOUR, EXTRUDED OVER ALL PVC SHEATH OF FOLLOWING SIZES:

3C X 120 SQMM - 750 METER
3C X 300 SQMM - 350 METER

THE CABLE SUPPLIES HAVE BEEN SATISFACTORY AND SUPPLIED TO US AS PER CONTRACTUAL DELIVERY PERIOD.

HT CABLES AS MENTIONED ABOVE HAVE BEEN COMMISSIONED AND THE PERFORMANCE OF THE SAME ARE FOUND SATISFACTORY.

YOURS TRULY,
For ABB LTD.

AUTHORIZED SIGNATORY

ABB Limited

Office: Mumbai (India)
Telephone: +91 22 2222 2222
Fax: +91 22 2222 2222
E-mail: aabb@india.net

Registered Office:
Mumbai (India)
Telephone: +91 22 2222 2222
Fax: +91 22 2222 2222
E-mail: aabb@india.net

Telephone: +91 22 2222 2222
Fax: +91 22 2222 2222
E-mail: aabb@india.net

Web address:
http://www.abb.com

No. 25(236)/SEE/PEC/BGL/2015-16/ 544 dated: 16.09.2015

Sub: Approval for brands for inclusion in NITs/Tenders

Sl No	Description of items	Brand of the product
1	LT Cables	KEI
2	PVC Insulated wires	KEI
3	Control cables	KEI

Copy to:

1. The executive Engineer(E), Postal electrical Division, Bangalore/Mumbai/Jaipur.
2. All Assistant Engineer(E)s, PESD under above divisions through EEs.
3. M/s KEI Industrial Limited, D-92, Old Industrial Area phase-1, New Delhi-110020

Executive Engineer (P&D)

◆◆◆◆◆

Forwarded/ By Order/ *[Signature]*
Spt. Grade Draughting Officer 7/15/2014
①
7/15/14



Contact Address:
Post Box No. 12
Durgam Cheruvu
Dist: Ranga Reddy (West Bengal)
Pin: 731 602, INDIA
Tel.: +91 03322422400/1364-400978
Fax: +91 03322422487/1364-400978

Date: 18/05/07

To,
M/s. KEI INDUSTRIES LTD.
D-90 OKHLA INDUSTRIAL ESTATE, PHASE-I
NEW DELHI - 110020
Phone - 6818840/42

Dear Sir,

Subject: Letter of Appreciation

We are pleased to inform you that Haldia Petrochemicals Limited has been certified as ISO 9001:2000 Company by Certifying Agency DNV

As per ISO norms, vendors working with HPL need to be evaluated for their performance. Accordingly, we sorted out our most important vendors for the purpose of evaluation and your company is one of them. We are glad to announce here that you have been rated as "Excellent" based on your performance for the period 01.04.06 to 30.09.06.

We expect you to maintain this trend and also hope that you will put your best efforts for further improvement in your performance.

Thanking you and looking forward to a fruitful and healthy business relationship between your company and Haldia Petrochemicals Limited in years to come.

Very truly yours
For Haldia Petrochemicals Limited

(Tarmay De)
 GM - Materials



1MA HOUSE ASHRAM ROAD
MEDABAD GUJARAT AHMEDABAD.
Phone : +91-79-2754655-74
Fax : +91-79-2754662-1, +91-79-2754660-7
E-mail : procurement@nirma.co.in

Date: 30/03/2007

/R. Id / Party Cd: 8001005VR000006 / 36783
KEI INDUSTRIES LIMITED
3-7, KALINDI FLATS, PASHABAHU PARK RACE COURSE
CIRCLE
BARODA GUJARAT BARODA.
Phone : 0265 5539710, 2339106
Fax : 0265 2334104
E-mail : nishimitra@kei.net

1: Madam/Sr.

2: Vendor Performance Rating Information.

3: Supplies of materials at ALINDRA

1 reference to the above subject, we would like to inform you that we have referred your past supplies of materials at our above for a period from date 01/10/2006 to 31/12/2006 and the details of our rating formula and your performance rating are as follows:

QUALITY - 70% (B) DELIVERY - 20% (C) SERVICE - 10%

ABOVE 95% - EXCELLENT
86% TO 95% - VERY GOOD
76% TO 86% - GOOD
66% TO 76% - NEEDS TO IMPROVE
56% AND BELOW - NEEDS TO IMMEDIATE REVIEW

Quality of materials (Rate of rejection)	Quality	70.00	Status :
Timely Delivery	Del	20.00	98%
General Response	Gen	8.00	Excellent
Overall Mark and Status	Total	98.00	

you obtained the total performance rating mark less than 66%, it means you have been failed on supplies of the material in quality, timely delivery & services, as committed by you with us. So we will compel to decide for further business with you.

you obtained the total performance rating mark between 66% and 85%, there is need/scope for improvement in quality, timely delivery of material. We will observe your next performance rating marks.

you obtained the total performance rating mark between 86% and 95%, that means you need more efforts to improve the quality, timely delivery of material to get the mark above 95% in future.

you obtained the total performance rating mark above 95%. Kindly keep it up and try to improve the quality, timely delivery of material to get maximum mark in future.

are, therefore, requested to put your constant efforts for improvement quality, timely delivery and general response as per our agreement.

he meantime, if you have obtained the rating 85% and below as per our above performance rating, you may please write to visit our procurement office for a detailed discussion with Shri C.J. Patel (DGM, Purchase) in the matter, after getting a prior appointment from Mr. Kishore Trivedi, Ext. No. 120, (Contact nos. and address as above).

इंडियन ऑयल कॉर्पोरेशन लिमिटेड
इली रिफाइनरी, बरौली : इली ऑयल रिफाइनरी
पिन : 851114
Indian Oil Corporation Limited
Barauni Refinery, P.O. : Barauni Oil Refinery
Bengaluru, Bihar - 851114
Phone : 06243 - 340183-86 (4 Lines)
Telex : OILINDIA, FAX : 06243-240150/240167
ISO 9001:2000, 14001 & OHSAS : 18001 Certified Refinery

Dec, 14th, 2006

TO WHOM IT MAY CONCERN

This is to certify that KEI Industries Limited has supplied 11 KV grade (UE) XLPE, 1C X 630 sq. mm. Copper cable against PO NO. RBRMMSE077/17452259 DTD. 17.08.2006

Quantity 2392 KM in 9 drums, vide KEI'S invoice No. B 002556 30.11.2006

Presently all the 9 drums are kept in store after physical inspection at our store.

G. K. PATEL
SRINMEL

जी.के.पटेल
वरिष्ठ मरुतम प्रबंधक (मिथुन)
इंडियन ऑयल कॉर्पोरेशन लि.
इली रिफाइनरी, बरौली-851114 (बिहार)

CC : Mr. Alok Saha

Dy. General Manager- Eastern India
KEI Industries Limited,
2/1 Kalibari Lane, Flat#1
Jadavpur, Kolkata - 700 032
West Bengal.

Barauni Refinery - In Harmony with Nature
परीक्षा कार्यालय : जी.के. इली चरम पैरा, बरौली, पुर्न-851114
Rygc Office : G-1, Air Refining Nagar, Barauni (Bihar) - 851114 (India)

M.P. HOUSING BOARD
Paryawas Bhawan,
Mother Teresa Marg,
Bhopal (M.P.)

No. /MPHIB/08-09/ Dated, the /11/2008

Circular No. 31/08, Dated 19/11/2008

"KEI" Brand ISI Marked PVC Insulated Wires (Up to 1.1 KV Grade) as per IS 694-1990 manufactured by M/S KEI Industries Limited, D-90, Okhla Industrial Area, Phase-I, New Delhi-110020 is approved for use in the works of M. P. Housing Board for a period of one year on trial basis.

The approval given above does not absolve supervisory officers from their responsibility. These Insulated Wires should be used only if they satisfy about the quality & Specifications. The quality & performance standard shall be watched and deficiency if any should be intimated to Head Office immediately.

(V. S. Joshi)

Addl. Housing Commissioner,
M.P. Housing Board, H.O., Bhopal.

Endt No. 5811 /MPHIB/08-09/ Dated the 25/11/2008

Copy to:-

1. The P.S. to Housing Commissioner, MPHIB, H.O., Bhopal
2. The Addl. Housing Commissioner, MPHIB, H.O., Bhopal
3. The Dy. Housing Commissioner, (T / V / A / M / CCR Cell / Etc.), MPHIB, H.O., Bhopal
4. The Chief Accounts Officer / Chief Audit Officer / Chief Architect, MPHIB, H.O., Bhopal
5. The Dy. Housing Commissioner, MPHIB, Circle No.-1 / 2 / 3 Bhopal / Indore / Gwalior / Ujjain / Jabalpur / Rewa
6. The Executive Engineer, MPHIB, Dn. 1-2-3-4-5 & 6 Bhopal / Hoshangabad / Sagar / Sagar Project / 1-2 Gwalior / Morena / Guna / Redensification Gwalior / Indore / Project Indore / Dhar / Khandwa / Ujjain / Ratlam / 1-2 Jabalpur / Balaghat / Katni / Chhindwara / Rewa / Satna / Sidhi / Chhatrapur / CSR Cell, (H.O.), Bhopal
7. The Executive Engineer(Elect.), MPHIB, Dn. Bhopal / Sagar Project / Indore / Jabalpur
8. M/S KEI Industries Limited, D-90, Okhla Industrial Area, Phase-I, New Delhi-110020 with reference to their letter No. KEI/INTRO/2008, dated 17/07/2008.

Addl. Housing Commissioner,
M.P. Housing Board, H.O., Bhopal.

MBC
Machhly Bharat ENGINEERING COMPANY LIMITED
4, HARSHAD LANE, 2ND & 3RD FLOORS, KOLKATA - 700 001, INDIA
PHONE : +91 3300 0000-0000, 2213 0000 - 09, 2204 0007 / 0019
FAX : +91 3300 0000 / 0004
E-mail : info@mbcengineers.com
Website : www.mbcengineers.com



TO WHOM IT MAY CONCERN

This is to certify that KEI Industries Limited has supplied 570 Meters of A2XWY, 11KV, 3 Core X 185 Sq.mm Cable against our P.O. No. 10286 dated 27.11.2006 for our Sarshatali Coal Washery Plant, A/C ICML, a subsidiary of CESC Limited.

The delivery & the quality assurances of this cable so far has been found to be Satisfactory.

As the Plant has not been commissioned till date, the Performance of this cable is yet to be ascertained.

K. N. BANERJEE
GENERAL MANAGER-ENGG

Member of Wipro Group

COMPANIES & REGISTERED OFFICE : 4, HARSHAD LANE, KOLKATA - 700 001

PRODUCT DIVISION :
P.O. HARSHAD LANE, 2ND & 3RD FLOORS, KOLKATA - 700 001
PH : (033) 2200 0000 / 2213 0000, 2204 0007
FAX : (033) 2200 0000 / 0004
E-mail : info@mbcengineers.com
Website : www.mbcengineers.com

SOUTHERN REGIONAL OFFICE :
PLOT No. 21-A, BODDAMANGUNI INDUSTRIAL AREA, 2ND STAGE,
MAHARAJPUR POST, BANGALORE - 560 046
PH : +91 (0832) 2541 1000/40
FAX : +91 (0832) 251 8074



552-3

404 To
KGI INDUSTRIES LTD
Plot no. 76, H. no. 3-14-52/1
SHUBHODAYA COLONY
NEAR LITTLE CHURCH SCHOOL
MANSURABAD, VANASTHALI PURBY
HYDRABAD - 500 070.

प्रति सम्मानित Dear Sir,

Sab: Registration as Supplier in Virkhiapatnam Steel Plant

Kindly refer to your application dt. 15.10.2022 for registration as supplier to this plant.

We are pleased to inform you that on the basis of information furnished by you in the application form, it has been decided to register your firm as our approved supplier with effect from the date of issue of this letter for the items indicated below:

1. - 4-T XLPE CABLES (≥ 1.1 kV & UP TO 33 kV)

3.
4.
5.
6.

The registration number allotted to you is 730491 and is subject to review on the basis of your performance.

The registration shall not bind Visakhapatnam Steel Plant to give you any priority or preference in the issue of Tenders and placement of Purchase Orders.

Please also note that this registration does not guarantee that all or any of the equipment is of the above items would necessarily be sent to you.

Please send your reply to:
VENDOR DEVELOPMENT CELL
 101st Bldg, Main Admin., Bldg.
 विश्वसम्पन्न भवन, मुख्य कार्य, विभाग/विभाग - 300 031.
 Vishwasamannam Bhavan, Main Admin. Bldg./Vishwasamannam - 300 031.

Phonex : +91 891 - 2418271, 2418272, 2418273, 2418274, 2418275, 2418276, 2418277, 2418278, 2418279, 2418280, 2418281, 2418282, 2418283, 2418284, 2418285, 2418286, 2418287, 2418288, 2418289, 2418290, 2418291, 2418292, 2418293, 2418294, 2418295, 2418296, 2418297, 2418298, 2418299, 2418300, 2418301, 2418302, 2418303, 2418304, 2418305, 2418306, 2418307, 2418308, 2418309, 2418310, 2418311, 2418312, 2418313, 2418314, 2418315, 2418316, 2418317, 2418318, 2418319, 2418320, 2418321, 2418322, 2418323, 2418324, 2418325, 2418326, 2418327, 2418328, 2418329, 2418330, 2418331, 2418332, 2418333, 2418334, 2418335, 2418336, 2418337, 2418338, 2418339, 2418340, 2418341, 2418342, 2418343, 2418344, 2418345, 2418346, 2418347, 2418348, 2418349, 2418350, 2418351, 2418352, 2418353, 2418354, 2418355, 2418356, 2418357, 2418358, 2418359, 2418360, 2418361, 2418362, 2418363, 2418364, 2418365, 2418366, 2418367, 2418368, 2418369, 2418370, 2418371, 2418372, 2418373, 2418374, 2418375, 2418376, 2418377, 2418378, 2418379, 2418380, 2418381, 2418382, 2418383, 2418384, 2418385, 2418386, 2418387, 2418388, 2418389, 2418390, 2418391, 2418392, 2418393, 2418394, 2418395, 2418396, 2418397, 2418398, 2418399, 2418400, 2418401, 2418402, 2418403, 2418404, 2418405, 2418406, 2418407, 2418408, 2418409, 2418410, 2418411, 2418412, 2418413, 2418414, 2418415, 2418416, 2418417, 2418418, 2418419, 2418420, 2418421, 2418422, 2418423, 2418424, 2418425, 2418426, 2418427, 2418428, 2418429, 2418430, 2418431, 2418432, 2418433, 2418434, 2418435, 2418436, 2418437, 2418438, 2418439, 2418440, 2418441, 2418442, 2418443, 2418444, 2418445, 2418446, 2418447, 2418448, 2418449, 2418450, 2418451, 2418452, 2418453, 2418454, 2418455, 2418456, 2418457, 2418458, 2418459, 2418460, 2418461, 2418462, 2418463, 2418464, 2418465, 2418466, 2418467, 2418468, 2418469, 2418470, 2418471, 2418472, 2418473, 2418474, 2418475, 2418476, 2418477, 2418478, 2418479, 2418480, 2418481, 2418482, 2418483, 2418484, 2418485, 2418486, 2418487, 2418488, 2418489, 2418490, 2418491, 2418492, 2418493, 2418494, 2418495, 2418496, 2418497, 2418498, 2418499, 2418500, 2418501, 2418502, 2418503, 2418504, 2418505, 2418506, 2418507, 2418508, 2418509, 2418510, 2418511, 2418512, 2418513, 2418514, 2418515, 2418516, 2418517, 2418518, 2418519, 2418520, 2418521, 2418522, 2418523, 2418524, 2418525, 2418526, 2418527, 2418528, 2418529, 2418530, 2418531, 2418532, 2418533, 2418534, 2418535, 2418536, 2418537, 2418538, 2418539, 2418540, 2418541, 2418542, 2418543, 2418544, 2418545, 2418546, 2418547, 2418548, 2418549, 2418550, 2418551, 2418552, 2418553, 2418554, 2418555, 2418556, 2418557, 2418558, 2418559, 2418560, 2418561, 2418562, 2418563, 2418564, 2418565, 2418566, 2418567, 2418568, 2418569, 2418570, 2418571, 2418572, 2418573, 2418574, 2418575, 2418576, 2418577, 2418578, 2418579, 2418580, 2418581, 2418582, 2418583, 2418584, 2418585, 2418586, 2418587, 2418588, 2418589, 2418590, 2418591, 2418592, 2418593, 2418594, 2418595, 2418596, 2418597, 2418598, 2418599, 2418600, 2418601, 2418602, 2418603, 2418604, 2418605, 2418606, 2418607, 2418608, 2418609, 2418610, 2418611, 2418612, 2418613, 2418614, 2418615, 2418616, 2418617, 2418618, 2418619, 2418620, 2418621, 2418622, 2418623, 2418624, 2418625, 2418626, 2418627, 2418628, 2418629, 2418630, 2418631, 2418632, 2418633, 2418634, 2418635, 2418636, 2418637, 2418638, 2418639, 2418640, 2418641, 2418642, 2418643, 2418644, 2418645, 2418646, 2418647, 2418648, 2418649, 2418650, 2418651, 2418652, 2418653, 2418654, 2418655, 2418656, 2418657, 2418658, 2418659, 2418660, 2418661, 2418662, 2418663, 2418664, 2418665, 2418666, 2418667, 2418668, 2418669, 2418670, 2418671, 2418672, 2418673, 2418674, 2418675, 2418676, 2418677, 2418678, 2418679, 2418680, 2418681, 2418682, 2418683, 2418684, 2418685, 2418686, 2418687, 2418688, 2418689, 2418690, 2418691, 2418692, 2418693, 2418694, 2418695, 2418696, 2418697, 2418698, 2418699, 2418700, 2418701, 2418702, 2418703, 2418704, 2418705, 2418706, 2418707, 2418708, 2418709, 2418710, 2418711, 2418

OFFICE OF CHIEF ELECTRICAL ENGINEER

Metro Rail Bhavan
33/1, J.L. Nehru Road
Kolkata - 700 071

TS/EL-432/2/TOL-NG/04/Ret/W /Pt-1

Dated 12/02/

To whom it may concern

It is to certify that M/s KEI Industries have manufactured and supplied in Sep-2007 LPE insulated 11kV copper cable with FRLS outer sheath (quantity 3000m) and LPE insulated 3.3kV grade DC positive copper cable with FRLS outer sheath (quantity 1000m) through M/s IRCON International for Metro Railway extension work from Tollygunge to Esplanade. The quality of the cable was found satisfactory.

171216 D
Dy. Chief Electrical Engineer

सत्यमेव जयते

1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 26

: 2 :

हमारे किसी भी कारण से बिना किसी जिम्मेदारों के इस धर्तीकरण की मंजूरी करने या इसे रद्द करने का हमें बूरा अधिकार होगा।
We also retain the right to review and cancel your registration at any time without assigning any reason, whatsoever, and without any liability on our part.

आपके संगठन का हमारे साथ फंजीकरण के दौरान आपके संगठन के भटन या कार्य, जो में कोई परिवर्तन हो तो सूचना दे गृहित करें। हम हर सप्ताह आठ.टी.बी.सी., वित्तीय विवरण और वार्षिक प्रतिवेदन भेज जाये हों।

Kindly intimate us changes, if any, in postal address, in the constitution or working of your firm during the currency of registration of your firm with us. Copies of ITCC, Financial Statements and annual reports should be forwarded to us each year.

कृपया इसकी यावत दें Please acknowledge

सधन्यवाद Thanking you.

भवदीय Yours faithfully,
कुसे विशाखपट्टणम इम्पाहा संयोज
for Visakhapatnam Sae Plant

34 मुख्य कार्य पत्रिका/पत्रिका - आयुर्वेदिक विकास
इलेक्ट्रिक/विकास
प्रबंधक (एन एम)/MANAGER (NM)
विशेष विकास कार्य
VENDOR DEVELOPMENT CELL
विशेष विकास कार्य
आयुर्वेदिक विकास
आयुर्वेदिक विकास

COMPANY LIMITED

Phone :26474211 / 26472131
Fax :91 22 26581299
Gram :COSGRID, Mumbai.
E-mail:

Central Purchase Agency,
Prakashgad, 1st Floor,
Bandra(East), Mumbai-400 051.
eestores5@mahatransco.in

Ref.: 0038 63 Dated :- 25 MAY 2011

BY RPAD / BY ORDINARY POST / FAX

To,
M/s. KEL industries Ltd.,
D-90, Phase-1, Okhla industries Area,
New Delhi- 110 020
FAX No.: (91)1126811959.

Sub: - Regarding to the Registration for cables of Bhiwadi Factory

Ref: - KEI/MUM/MSETCL/2011 dtd. 05.05.2011

Dear Sirs,

With reference to the above, you are approved for following. Sizes and voltage grade of cables along with accessories with MSETCL.

- 1) 11KV HT XLPE Cables
- 2) 22KV HT XLPE Cables
- 3) 33KV HT XLPE Cables
- 4) 1.1KV LT XLPE FRLS Power Cables
- 5) 1.1KV LT PVC FRLS control Cables
- 6) 132 KV XLPE Cables
- 7) 132 KV GRADE end termination and straight through joint

Your's Faithfully,

Executive Engineer (St.VIII)
For Executive Director (Operations)

VINAY GUPTA

To whomsoever it may concern

This is certify that M/s. KEI Industries Limited, has supplied various HT XLPE Cables against our purchase order no.SEF/2839 Dated 02.09.2006 Details of cables

S.No.	Size of Cable	Voltage Grade	Qty (Km)
1	3 C X 185 SQ.MM	11KV (E)	42 Km.

Further, this to certify that cable had laid & commissioned. Performance of the cables found satisfactory.

You're faithfully,

For Swastika Electricals and Fertilizers

Vinay Gupta
Vinay Gupta
Director

SWASTIKA ELECTRICALS & FERTILISERS

Jaipur : Opp. Nandan Hotel, Motilal Atal Road, JAIPUR, Phone : 91-141-2361106 / 2374267 Fax : 2372676 E-mail : swastika001@hotmail.com
New Delhi : 1101, Gditi Tower, B-08, Netaji Subhash Place, New Delhi-34 Ph. / Fax : 91-11-47059503-04 E-mail : swastika001_del@aintelbroadband.in
Bangalore : 243, 2nd Floor, Adi Complex, Chickpet Main Road, Bangalore-560 053 Phone : 91-80-22386369 Fax : 91-8022910266

VINAY GUPTA

To whomsoever it may concern

This is certify that M/s. KEI Industries Limited, has supplied various HT XLPE Cables against our purchase order no.SEF/1097/2005-06 Dated 14.02.2006 Details of cables

S.NO.	Size Of Cable	Voltage Grade	Qty (KM)
1	3 C X 300 SQ.MM	33KV (E)	16 KM.
2	3 C X 300 SQ.MM	11KV (E)	2 KM.
3	3 C X 185 SQ.MM	11 KV (E)	25 KM
4	3 C X 50 SQ.MM	11 KV (E)	3 KM

Further, this to certify that cable had laid & commissioned. Performance of the cables found satisfactory.

You're faithfully
For Swastika Electricals and Fertilizers

Vinay Gupta

Vinay Gupta
Director

SWASTIKA ELECTRICALS & FERTILISERS

Jaipur : Opp. Nandan Hotel, Motilal Atal Road, JAIPUR, Phone : 91-141-2361106 / 2374267 Fax : 2372676 E-mail : swastika001@hotmail.com
New Delhi : 1101, Gditi Tower, B-08, Netaji Subhash Place, New Delhi-34 Ph. / Fax : 91-11-47059503-04 E-mail : swastika001_del@aintelbroadband.in
Bangalore : 243, 2nd Floor, Adi Complex, Chickpet Main Road, Bangalore-560 053 Phone : 91-80-22386369 Fax : 91-8022910266



**MAHARASHTRA JEEVAN PRADHIKARAN
OFFICE OF THE SUPERINTENDING ENGINEER (M)**

Maharashtra Jeevan Pradhikaran
Jaltarang Compound, Kopari,
Thane (East)

Telefax 022/25321788(Office)

E-mail semechmjprhano@rediffmail.com

No./MJP/SE(M)/New Approval/ 312 /10. Date: 31 / 5 /2010.

To
M/s.KEI Industries Ltd.,
D-90, Okhla Ind.Area,
Phase - 1 New Delhi-110020

Sub: Approval to "KEI" make cables in MJP.

Ref: 1) Your application for registration dated- 1.9.09

Dear Sir,

With reference to above, Maharashtra Jeevan Pradhikaran is pleased to accord approval to "KEI" make various types of cables in MJP, manufactured at your Bhiwadi, Rajasthan plant as under.

i)	Details of manufacturer with location of factory address	Factory Address : M/s.KEI Industries Ltd., SP-919,920,922 Riico Industrial area, Phase-3, Bhiwadi 301019, Dist. Alwar (Rajasthan) Phone No-01493-220106/221731 Fax- No-01493-221732 E-mail-monoikei@Satyannet.in
ii)	Make	"KEI"
iii)	Product range	HT/LT Cables, sub cables, control cable
iv)	Validity	Up to 30.6.2013

For further continuation/upgradation please submit your application along with a demand draft of Rs 30,000/-for SSI or Rs 50,000/-for Medium /large Ind.in favour of "Maharashtra Jeevan Pradhikaran" of any nationalized bank payable at Mumbai only .Also submit following documents up to 31.5.2013.

Committee meeting

- 37 -

1)Performance certificate of end user duly notarized and attested by your Co. from M.J.P./ Z.P./ G.S.D.A./M.I.D.C./CIDCO/MSEB or any such Corporate body (at least 3 certificates from Govt. Sector & two certificates from private sector.)

2) Valid B.I.S. License certificates (photocopy.)

3) Current Price list.

4) Latest authorized dealers list for Maharashtra.

Please note the continuation will be withdrawn in case of failure to provide proper after sales service.

Thanking you.

Yours faithfully

(Signature)
Superintending Engineer (M)

Copy submitted to the Chief Engineer, Maharashtra Jeevan Pradhikaran, Aurangabad/Nagpur/Nashik/Pune/Thane for favour of information please.

Copy forwarded with compliments to the Superintending Engineer (M), Maharashtra Jeevan Pradhikaran, Nagpur for information.

Copy forwarded with compliments to the (All) Superintending Engineer, Maharashtra Jeevan Pradhikaran Circle, for information and necessary action.

Copy to master file.

Committee meeting

- 23 -

मुंबई पोर्ट ट्रस्ट
MUMBAI PORT TRUST
यांत्रिकी अभियंता विभाग
MECHANICAL ENGINEERING DEPARTMENT

Code No. 800500430002

दुरध्वनी : 6656 5656
फोन : (91-22)2374 4277



मुख्य यांत्रिकी अभियंता का कार्यालय
निर्मल भवन, पश्चिमी मजला,
माझगाव, मुंबई - 400 010, इंडिया

CHIEF MECHANICAL ENGINEER'S OFFICE,
NIRMAN BHAVAN 5TH FLOOR, MAZGAON,
MUMBAI - 400 010, INDIA.

टेल : 6656 5656
फैक्स : (91-22)23744277

No. CMET-2-G 2320

17 NOV 2009

To,
KEI Industries Ltd.,
101-103, Vastu Ship,
Vastu Inclave,
Andheri Pump House,
Jijamata Road,
Andheri (East),
Mumbai - 400 093.

Fax No. 28258277

Dear Sir,

Sub: Enlistment as an approved vendor
for wires and cables.

Ref: Your letter No. KEI/MUM/MP11-2009
dated 25.09.2009.

With reference to your request / application, we are pleased to inform you that you are enlisted as one of the approved vendor for supply of wires and cables as described in the enclosed statement. The approval has been granted on the basis of documents / information furnished by you.

2. Mumbai Port Trust (MbPT) reserves the rights to revoke / suspend the aforesaid enlistment any time on the basis of periodic review.

3. This approval shall not bind MbPT to give you any priority or preference in the issue of enquiry and placement of purchase orders and does not guarantee that all or any of the enquiries for the products would necessarily be sent to you.

4. You are also requested to intimate to us changes, if any, in postal address, contact details, etc. from time to time.

5. Changes if any, in the technical specifications, pricing, etc. shall also be intimated to MbPT from time to time.

Yours faithfully,

S.S. KHARCHE
EXECUTIVE ENGINEER (M)

DA - 1 Statement

मुंबई पोर्ट ट्रस्ट
MUMBAI PORT TRUST

STATEMENT

ANNEXURE - I

Approval of 'KEI' brand cables for the use of MbPT for the following items.

Sr.No.	Description of Item
1.	Cable (Power) PVC insulated, PVC sheathed with flat strips/round wire Armoured 1 core, 2 core, 3 core, 3 1/2 core, 4 core, 1100 volts grade/class copper conductor with ISI mark.
2.	Core (Power) PVC insulated, PVC sheathed with flat/round wire Armoured 1 core, 2 core, 3 core, 3 1/2 & 4 core, 1100 volts grade/ class, Aluminium conductor with ISI mark.
3.	Cable XLPE (cross linked Poly Ethylene), insulated Aluminium conductor in all sizes of 6.35 KV/ 11 KV/22 KV grade with ISI mark
4.	Control cable 1.5 mm2 and 2.5 mm2 solid strand PVC insulated and upto 61 cores PVC sheathed, Armoured and Unarmoured copper conductor with 1100 volts grade with ISI mark
5.	Cable welding having Ethylene Propylene Rubber (EPR) or Poly Chloroprene (PCP) insulation with copper conductor. (HOFR type) upto 50 mm2 size with ISI mark
6.	Instrumentation cable upto 50 pairs
7.	Wire PVC insulated without sheath, single core 1100 volts grade with copper conductor, solid or multistranded with ISI mark
8.	Wire flexible PVC insulated and PVC sheathed single core (multistranded) and multicore (multistranded) 1100 volts grade, copper conductor with ISI mark
9.	Wire PVC insulated and PVC sheathed single core 1100 volts grade, copper conductor with ISI mark

BSES

BSES Yamuna Power Limited
Shakti Kiran Building, Kirti Vihar,
Sector 10, Block 1, Gurgaon, India
Tel: 011-2616 9999
Fax: 011-2616 9403
www.bsesindia.com

A joint venture of BSES Limited with Govt. of NCT, Delhi

Date: 8th April 2010

TO WHOMSOEVER IT MAY CONCERN

This is to certify that KEI Industries Ltd, New Delhi has successfully supplied full quantity of 10KM, 1CX1000 sq mm, 66 KV (E) AL/ XLPE / LEAD ALLOY SHEATH Cable against Purchase order No. D01/23034639 Dated 31.07.2009

The Quality and service offered by KEI Industries Ltd during execution of above order found satisfactory.

Out of 10 kms of cables supplied, 7.5 kms have been laid and charged. The cables are in operation and working satisfactorily.

Devender Sharma

Head (CES)
B Block 3rd Floor
Shakti Kiran Building
Sharkardooma
New Delhi

GOVERNMENT OF TAMIL NADU
PUBLIC WORKS DEPARTMENT
CERTIFICATE OF PRODUCT APPROVAL

No. 13A/55 ASC/TABRS / dated 12.04.2017

The Assessment Committee constituted by the Government of Tamil Nadu under the Chairmanship of Engineer-in-Chief (Buildings), Public Works Department examined various aspects of the following products in its 55th meeting held on 22nd March 2017 and have accorded approval.

Products / Product Range • "KEI" Polyvinyl Chloride Insulated Unsheathed and Sheathed Cables/ Cords with Rigid and Flexible Conductor for Rated Voltages up to and including 1100V

Manufacturer / Company • M/s. KEI Industries Limited, Flat No.10, 1st Floor, Rams Apartment, No.68, (Old No.141) Eldams Road, Teynampet, Chennai-600018.

References • BIS License Number CML 7380172

Standards/ Specifications • IS 694:2010

Limitations • Approval is subject to validity and scope of BIS License for the product and compliance to the specification mentioned

Test results produced at the time of approval should be adhered to.

Any change of materials, manufacturing process, quality control routines that may affect the validity of this certificate should be notified to the Assessment Committee, PWD, Government of Tamil Nadu.

The certificate is valid from 12.04.2017 up to and inclusive of 11.04.2020 for a period of three years.



Member Secretary, Assessment Committee & Superintending Engineer, PWD, Planning and Designs Circle (Buildings), Chepauk, Chennai - 600 005.



Offshore Design Section,
Offshore Engineering Services
ISC: 9001-2008
OFFSHORE SUGGESTED VENDOR LIST
Rev 6.5 (April 03, 2013)

Rev No: 6.5
Discipline: All
Page: 34 of 43

S.No	Product	Vendor Name	Country	
12	Lighting & Power Distribution Panel, AC Distribution Board & DC DISTRIBUTION BOARD	a) Legrand (India)	India	On Hold
		b) Indo Asian Switch Gear	India	
		c) Versatip Circuit Breaker Mfg. Pvt. Ltd. Mumbai	India	
		d) BCI Electric Ltd	India	On Hold
		e) Reunion Engg. Co. Mumbai	India	
		f) Fabricons, Mumbai	India	
		g) Siemens	Germany/India	On Hold
		h) HHI	Korea	
		i) Marine Electricals	India	
		k) HEECO	Korea	On Hold
		l) Schneider Electric India Pvt. Ltd.	India	
		m) Middle East Switch Gear Ltd	Sharjah	
13	Solar Power System	n) Cooper Crouse-Hinds	USA	On Hold
		o) R STAHL	Germany	
		a) Central Electronics Ltd	India	
		b) BHEL	India	On Hold
		c) Tata SP Solar	India	
		d) BP Solar	Australia	
		e) Sonapack	UK	On Hold
		f) SICE s.r.l	Italy	
		g) SunPower Corporation	USA / India	
		a) Universal Cables, Satna, MP	India	On Hold
		b) INCOB	India	
		c) Cable Corporation of India	India	
14	Fire Survival Cables	d) Polycab	India	On Hold
		e) Prysmian PowerLink Sri	Italy	
		f) BICC	Singapore	
		g) Associated Flexible & Wires Pvt. Ltd.	India	On Hold
		h) KEI Industries Ltd	India	
		i) Nexans (Kukdong)	Korea	
		a) SSB Industries, Bangalore	India	On Hold
		b) Ercron, Jodhpur	India	
		c) General Composites Pvt.Ltd	India	
		d) INDIANA, Mumbai	India	On Hold
		e) Enduro	USA	
		f) Bump Composites Pvt.Ltd	India	
15	FRP Cable Trays	g) Simtex Industries Ltd	India	On Hold
		h) Ogilvie System	Malaysia	
		i) Kemrock Industries & Exports Ltd	India	
16	Batteries (Ni-Cd)	a) AMCO Power System	India	On Hold
		b) HBL Power systems Ltd	India	
		c) Amara Raja Batteries Ltd	India	
		a) Baliga Lighting Equipment	India	On Hold
		b) Flexpro Electrical, Mumbai	India	
		c) FCG Flame Proof Control Gears Pvt. Ltd	India	
		d) FCG Power Industries Pvt. Ltd	India	On Hold
		e) Flameproof Equipments Pvt. Ltd	India	

Please refer the notes at the end of the list.

Indicates change from Rev 6.4

April 03, 2013



Life Insurance Corporation of India
Office of the Chief Engineer
25 Kasturba Gandhi Marg, New Delhi-110001

Engg/ Planning/ Approved Makes

Dated: 01.09.2011

M/s K E I INDUSTRIES LIMITED,
D - 90, Okhla Industrial Area, Phase I,
New Delhi 110020,

Dear Sirs,

Reg. Enlistment of M/s "KEI Industries Ltd" for LIC works under Northern Zone

We are pleased to inform you that the Competent Authority has approved enlistment of your "K E I" make for PVC insulated multistrand wires, PVC insulated /sheathed armoured cables, XLPE PVC insulated aluminium conductor cables under Northern Zone which includes Delhi, Haryana, Punjab, Himachal Pradesh, Rajasthan, Jammu & Kashmir areas.

The above approval has been granted initially for two years to be extended after getting feedback from our engineers. We will be free to test these products in any laboratory as per relevant ISI Codes. Your enlistment with LIC shall not bind LIC to give you any priority or preference in the issue of any enquiry & placement of purchase orders & does not guarantee that all or any of the enquiries for your products would necessarily be sent to you.

Yours faithfully,

[Signature]
Supdtg Engineer.

आप को सूचित किया जाता है, कि आपका निवेदन "जीकेई इंडस्ट्रीज लिमिटेड" (जीकेई लिमिटेड) 25, कां. रोड, नई दिल्ली-110001
द्वारा प्राप्त : 28/04/11, 28/04/11, फोन : 28/04/11, 28/04/11, ई-मेल : kei_engg@keiindia.com

Northern Zonal Office, Engineering Department, "Jeevan Prakash", (2nd Floor), 25, K.G. Marg, New Delhi-110001
Tel : 28/04/11, 28/04/11, Fax : 28/04/11, 28/04/11, Telegram : "Jeevan Prakash", e-mail : kei_engg@keiindia.com



TAMIL NADU TRANSMISSION CORPORATION LTD,
CHENNAI DEVELOPMENT CIRCLE - I
TANTRANSCO, GUINDY, CHENNAI - 32

Scope of work: Supply, laying, Testing & Commissioning for a route length of 10.552 KM of 230KV, 1X1200sq.mm XLPE Aluminum UG cable and accessories, from 230 KV Ambattur Third Main Road SS to 230KV Thiruvarkadu HGIS SS, under Turnkey basis.

Name of the Contractor: M/s KEI Industries Limited, Okhla Indl Area, New Delhi-110020.

Work Order Ref: LOA No.: CE/TR/SE/TR/ITE/C/A3/F.T-1827/LOI-2646/D.25/15 dt. 26.02.2015.

This is to certify that M/s KEI Industries Limited, Okhla Indl. Area, New Delhi-110020, India, have supplied the following materials as per the Contract and successfully test charged on 18.08.2017 and commissioned the feeder with load on 08.01.2018 satisfactorily. The above feeder is in service without trouble till date.

S.No	Items	Make	Quantities supplied
1	230kV, 1CX1200 Sq.mm, Al, XLPE UG Cable	KEI	32238m
2	230kV, Normal Straight Through Joints	Brugg	54nos
3	230kV, Insulated Joints	Brugg	15nos
4	230kV, Outdoor Termination	Brugg	06 nos
5	Optical Fibre Cable (24 Fibre)	Akash	10893m

[Signature]
SUPERINTENDING ENGINEER
CDC I/TANTRANSCO,
A-10, Thiru.Vi.Ka.Industrial Estate,
Guindy/Chennai-600032.



TAMIL NADU HOUSING BOARD
CERTIFICATE OF PRODUCT APPROVAL
File No. QC/33979/2018 date 28.12.2018

The Chief Engineer (City), Tamil Nadu Housing Board has examined various aspects of the following products with reference to your letter No. Nil dated. 02.07.2018 and has accorded approval on 28.12.2018 on the following products in the works carried out by Tamil Nadu Housing Board Projects.

1. NAME OF THE COMPANY	::	M/s. KEI INDUSTRIES LTD
2. NAME OF THE PRODUCT	::	1. KEI WIRES, LT CABLES, HT CABLES
3. BIS LICENCE	::	1. BIS License No.CM/L 7380172 dated 06.07.2018 Valid up to 30.06.2019 2. BIS License No.CM/L 7566489 dated 10.10.2017 Valid up to 28.9.2019 3. BIS License No.CM/L 8738194 dated 11.10.2017 Valid up to 31.07.2019.
4. STANDARD SPECIFICATION	::	1. IS 694:2010 2. IS 7098: Part 1 1988 3. IS 7098: Part 2 2011
5. PWD APPROVAL	::	1. PWD No.13A/55 ASC/TABRS/dated 12.04.2017 valid up to 11.04.2020 2. PWD No.13B/55 ASC/TABRS/dated 12.04.2017 valid up to 11.04.2020 3. PWD No.13C/55 ASC/TABRS/dated 12.04.2017 valid up to 11.04.2020
6. TEST REPORTS	::	1. Test Report obtained from ERADA vide test report No.RP-1516-012207 dated 30.06.2015 2. Test Report obtained from ERADA vide test report No.ICWRWO00912507-a dated 21.04.2012 3. Test Report obtained from CPRI vide test report No.CPRI/RTLCL2014T215 dated 29.01.2015. 4. Test Report obtained from CPRI vide test report No.CPRI/RTLCL2014T215 dated 29.01.2015.



RASHI STEEL AND POWER LTD.

(Formerly Known as Rashi Strips Pvt. Ltd.)

BF-1, First Floor, Opp. Axis Bank, Rajiv Plaza, Bilaspur 495 001 (C.G.)
Ph.: +91 7752 408405 Fax: +91 7752 239923 E-mail: rashistrips@gmail.com

PURCHASE ORDER

10000000

VENDOR	P.O. No: RSPL/ PO1314 /10182	Date: 21/10/13
KEI Industries Limited	Email ID: rashistrips@gmail.com	
Near Maharashtra School 103, Misal Layout	Contact Person: Ajay Krishna Sharma, Vishesh Dixena	
Nagpur-440014	Contact No: 7898986915, 7879845015,	
IN	Fax No: +91 7752 2359 Tel No: +91 7752 408405	
	TIN No: 22944302094 CST No: 22944302094	
	ECC No: AAECR6450QEM001 Excise Range: BILASPUR	
	Excise Division: BILASPUR Excise Commission: RAIPUR	

We are pleased to inform you that we have found your offer competitive & are here under placing our order for the following items:

Sl.	Item Description	Make/TS	QTY	UoM	Rate	Total Amount
1	PVC Type A Insulated Core Twisted FRLS Instrument Cable (2 Pair X1.5 Sq.mm)	KEI Make Stranded(Class	2,000	Mtr	90.97	181,940.00
2	PVC Type A Insulated Core Twisted FRLS Instrument Cable (4 Pair X1.5 Sq.mm)	KEI Make Stranded(Class	1,500	Mtr	141.15	211,725.00
3	PVC Type A Insulated Core Twisted FRLS Instrument Cable (8 Pair X1.5 Sq.mm)	KEI Make Stranded(Class	2,000	Mtr	242.00	484,000.00
4	PVC Type A Insulated Core Twisted FRLS Instrument Cable (12 Pair X1.5 Sq.mm)	KEI Make Stranded(Class	1,500	Mtr	343.96	515,940.00
5	PVC Type A Insulated Multi Core FRLS Instrument Cable (2 Core X0.75 Sq.mm)	KEI Make Stranded(Class	2,000	Mtr	39.29	78,580.00
6	PVC Type A Insulated Multi Core FRLS Instrument Cable (3 Core X0.75 Sq.mm)	KEI Make Stranded(Class	1,500	Mtr	45.14	67,710.00
7	PVC Type A Insulated Multi Core FRLS Instrument Cable (6 Core X0.75 Sq.mm)	KEI Make Stranded(Class	5,000	Mtr	64.79	323,950.00
8	PVC Type A Insulated Multi Core FRLS Instrument Cable (8 Core X0.75 Sq.mm)	KEI Make Stranded(Class	1,000	Mtr	76.97	76,970.00
9	Cu ARMoured Cable 3 Core X 2.5 Sqmm	KEI Make Stranded(Class 2)	2,500	Mtr	72.85	182,125.00
10	Cu ARMoured Cable 4 Core X 2.5 Sqmm	KEI Make Stranded(Class 2)	10,000	Mtr	89.27	892,700.00
11	Cu ARMoured Cable 5 Core X 1.5 Sqmm	KEI Make Stranded(Class 2)	1,500	Mtr	76.27	114,405.00
12	Cu ARMoured Cable 4 Core X 4 Sqmm	KEI Make Stranded(Class 2)	1,500	Mtr	128.46	192,690.00
13	Cu ARMoured Cable 4 Core X 6 Sqmm	KEI Make Stranded(Class 2)	5,000	Mtr	173.00	865,000.00
14	Cu ARMoured Cable 4 Core X 16 Sqmm	KEI Make Stranded(Class 2)	5,000	Mtr	374.29	1,871,450.00
15	Cu ARMoured Cable 3 Core X 2.5 Sqmm	KEI Make Stranded(Class 2)	3,000	Mtr	66.88	200,640.00
16	Cu UNARMoured Cable 1 Core X 6 Sqmm	KEI make, 1.1 KV Single/Multi Core	500	Mtr	32.99	16,495.00
17	Cu UNARMoured Cable 3 Core X 2.5 Sqmm	KEI make, 1.1 KV Single/Multi Core	2,500	Mtr	47.77	119,425.00
18	AL ARMoured Cable 16.0 sq. mm x 3 core	KEI Make Stranded(Class	8,000	Mtr	62.43	499,440.00
19	AL ARMoured Cable 16.0 sq. mm x 4 core	KEI Make Stranded(Class	3,000	Mtr	75.49	226,470.00
20	AL ARMoured Cable 120.0 sq. mm x 3.5 core	KEI Make Stranded(Class	1,000	Mtr	296.69	296,690.00

Registered Office : A-184, Meera Bagh, New Delhi - 110 087



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BF-1, First Floor, Opp. Axis Bank, Rajiv Plaza, Bilaspur 495 001 (C.G.)
Ph.: +91 7752 408405 Fax: +91 7752 239923 E-mail: rashistrips@gmail.com

PURCHASE ORDER

10000000

VENDOR	P.O. No: RSPL/ PO1314 /10182	Date: 21/10/13
KEI Industries Limited	Email ID: rashistrips@gmail.com	
Near Maharashtra School 103, Misal Layout	Contact Person: Ajay Krishna Sharma, Vishesh Dixena	
Nagpur-440014	Contact No: 7898986915, 7879845015,	
IN	Fax No: +91 7752 2359 Tel No: +91 7752 408405	
	TIN No: 22944302094 CST No: 22944302094	
	ECC No: AAECR6450QEM001 Excise Range: BILASPUR	
	Excise Division: BILASPUR Excise Commission: RAIPUR	

We are pleased to inform you that we have found your offer competitive & are here under placing our order for the following items:

Sl.	Item Description	Make/TS	QTY	UoM	Rate	Total Amount
21	AL ARMoured Cable 35.0 sq. mm x 3 core	KEI Make Stranded(Class	2,500	Mtr	97.80	244,500.00
22	AL ARMoured Cable 150.0 sq. mm x 3 core	KEI Make Stranded(Class	2,500	Mtr	307.91	769,775.00
23	AL ARMoured Cable 95.0 sq. mm x 3 core	KEI Make Stranded(Class	2,500	Mtr	206.28	515,700.00
24	AL ARMoured Cable 240.0 sq. mm x 3 core	KEI Make Stranded(Class	2,000	Mtr	479.72	959,440.00
25	AL ARMoured Cable 70.0 sq. mm x 4 core	KEI Make Stranded(Class	1,500	Mtr	208.64	312,960.00
26	AL ARMoured Cable 70.0 sq. mm x 3 core	KEI Make Stranded(Class	2,500	Mtr	165.27	413,175.00
27	AL UNARMoured Cable 1 Core X 150 Sqmm	KEI Make Stranded(Class	500	Mtr	1,213.21	606,605.00

Registered Office : A-184, Meera Bagh, New Delhi - 110 087



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PURCHASE ORDER

10000000

VENDOR	P.O. No: RSPL/ PO1314 /10182	Date: 21/10/13
KEI Industries Limited	Email ID: rashistrips@gmail.com	
Near Maharashtra School 103, Misal Layout	Contact Person: Ajay Krishna Sharma, Vishesh Dixena	
Nagpur-440014	Contact No: 7898986915, 7879845015,	
IN	Fax No: +91 7752 2359 Tel No: +91 7752 408405	
	TIN No: 22944302094 CST No: 22944302094	
	ECC No: AAECR6450QEM001 Excise Range: BILASPUR	
	Excise Division: BILASPUR Excise Commission: RAIPUR	

We are pleased to inform you that we have found your offer competitive & are here under placing our order for the following items:

Sl.	Item Description	Make/TS	QTY	UoM	Rate	Total Amount
28	SI UNARMoured Cable 1 Core X 240 Sqmm	KEI Make Stranded(Class	500	Mtr	1,919.49	959,745.00
						Total 12,202,245.00
						S.Tax/Excise 1,464,269.40
						Edu.Cess 29,285.41
						H.Edu.Cess 14,642.70
						CST 39,406.48
						Freight 0.00
						Grand Total 13,749,848.99

Commercial Terms and Conditions

Price: Fixed Taxes & Duties: ED@12.36 % + CST@1% / ED@12.36%

Freight: FOR Delivery: Delivery Within 6-10 Weeks From Date Of LOI.

Payment Term: PT 10%Agnt. ABG, 10%Agnt. PBG, 80% Agnt. Usance LC Of 30 Days After Material Recd At Site.

Amount in words: Rs. One Crores Thirty Seven Lacs Forty Nine Thousand Eight Hundred Forty Eight And Ninety Nine Paise Only

General Terms and Conditions

- Time is essence of this order and delivery must be made as per delivery schedules unless otherwise differed by us writing.
- Delivery of goods should be within the delivery time frame as mentioned above, failing of which the order will be cancelled.
- In the event, the supplier fails to deliver the goods of the ordered quality or deliver different and /or sub-standard make/quality, the company reserves right to reject the material and inform the supplier to lift the material from our stores at his own cost. Incoming freight, if any, paid for these shall also be recovered. Breakage/loss if any during transit due to poor packing or handling shall be to supplier's account.
- Please ensure that separate invoices are raised for each Delivery Challan and submitted in DUPLICATE along with delivery of the goods.
- Please mention our Purchase Order No. in all your correspondence and invoices & Delivery Challans for prompt action.
- Please ensure that your CST/ST/TIN/TAN/ECC Nos. are mentioned on your invoices.
- ARBITRATION: All disputes of differences whatsoever arising between the parties out of or in relation to work/supply of work order/purchase order or effect to dis-contract or breach thereafter shall be settled amicably. However, if the parties are unable to solve them amicably, the same shall be finalized setting by arbitration and reconciliation. The award may in pursuance thereof shall be final and binding on the parties.
- DELIVERY: Delivery of goods shall be made as per delivery schedule. The goods shall be delivered to the parties at their own risk. The company shall not be responsible for any loss or damage to the goods during transit.
- LD Clause will be applicable from 11th week from date of LOI. For delay in delivery 0.5% of Total PO Value Per week of delay or part thereof, subject to maximum of 5% of total PO Value.
- Delivery Schedule - 50% of total individual materials (Qty) should be supplied within 15th to 20th Nov 2013 & Bal. mat. Qty. Within 20th Dec 2013.
- For QTY, MAKE, Technical specification and All Terms & condition please refer Annexure 1,2,3 attached with PO.

FOR Rashi Steel and Power Ltd

Printed from SAP Business One

Authorized Signatory

Registered Office : A-184, Meera Bagh, New Delhi - 110 087

MUNICIPAL CORPORATION OF GREATER MUMBAI

No. Ch.E. / M&E / 2748 of

04 AUG 2014

Office of the
Chief Engineer (Mechanical & Electrical),
Engineering HUB Building, 1st Floor,
Dr.E.Moss's Road, Worli Naka, Worli,
Mumbai - 400 018
Tel.No.24938001/8101 Ext.
2028, 2071
E-Mail: cemnepnd@gmail.com
aspl@5.mcgm.gov.in

To,
M/s KEI Industries Limited
101/102/103, Vastu Shilp,
Vastu Enclave, Jijamata Road,
Andheri Pump House,
Andheri(East), Mumbai-400093.

Subject :- Approval of upgradation of "KEI" brand cables & wires in 1st category.

Reference : KEI/MUM/DT/2013-14 dated 2/8/2013.

Gentlemen,

This is to inform you that the following products manufactured by you at the manufacturing unit at Silvassa plant are approved and included in the 'Unified Schedule of Rates for M&E-2013' of MCGM.

Sr.No.	I.S. No.	Product
1.	I.S.694/1990	PVC insulated copper conductor, pvc sheathed/FRLS sheathed/cables & Flexibles & Aluminium/copper pvc wires.
2.	I.S.7098/Part-I & II/1988	XLPE insulated Armoured/unarmoured & pvc sheathed/FRLS sheathed Aluminium/ copper conductor cables / III cables ranging from 6.6 KV to 132 KV.
3.	I.S.1554/Part-I/1988	PVC insulated Armoured/unarmoured & pvc sheathed/FRLS sheathed Aluminium/copper conductor cables.

INTEGRATED COAL MINING LIMITED

6, Church Lane (1st Floor), Kolkata - 700 001
Telephone Nos : (033) 2210 8558-62 (8 Lines)
Fax : (033) 2210 8558
E-mail : icml@icml.co.in

ICMLWO/079/10-11

Dated: 27th September, 2010

KEI Industries Ltd.
33, Dr. Sandan Mohan Avenue, 1st Floor
Kolkata-700014

WORK ORDER

Sub: Power Supply arrangement at Sarshatal Open Cast Mines - Supply of HT, LT and Control Cables

- Ref: 1) Our NIQ no. ICML/G.H./J/K/2010-11 dated 07.06.2010 for HT, LT and Control Cable
2) Our Specification no. TCE/5967A-EL-PCA-730-01
3) Your offer no. KEI-KOL/ICML/10-11/Q-135/R dated 24.08.2010 for supply of HT, LT and Control Cables
4) Final negotiation meeting held on 18.09.2010
5) Your revised offer no. KEI-KOL/10-11/ICML/Q-135R dated 18.09.2010 based upon Negotiation meeting held on 18.09.2010 for supply of HT, LT and Control Cables

Dear Sirs,

With reference to the above, this is to convey the acceptance of your offer for supply of HT, LT and Control Cables as per our tender specification and BOQ and settled terms & conditions in connection with Power Supply arrangement at Sarshatal Open Cast Mines:

1. SCOPE OF SUPPLY:

HT, LT and Control Cables as per specification and BOQ attached in Annexure - 1

II. SUMMARY OF PRICES

Sl. No	Description	Amount (Rs)
1	a. Total Price for the supply of HT, LT and Control Cables as per specification and BOQ attached in Annexure - 1 inclusive of taxes, duties and freight & insurance charges.	1,39,48,569
	Total	1,39,48,569
	(Rs. One Crore Thirty Nine Lakh Forty Eight Thousand Five Hundred and Sixty Nine only)	



Ref.: PMCH/14-15/1234

Date: 19/03/2015

TO WHOMSOEVER IT MAY CONCERN

Performance Certificate

This is to certify that M/s KEI Industries Ltd D-90 Okhla Industrial Area, Phase-1, New Delhi-110020 has supplied FR (Homecab) wire, Multicore flexible, LT Control & Power cables, HT Cables for a value of nearly 3.5 crore against our various purchase orders for our Pacific Medical College & Hospital, Bhillo Ka Bedia, Udaipur (Raj.) and Pacific Institute of Medical Sciences, Umerda, Udaipur (Raj.) during 2012 to 2015. The performance of their Product (Wires & Cables) is satisfactory and there is no adverse report against the product so far.

(Rahul Aggarwal)
Secretary

PACIFIC MEDICAL COLLEGE & HOSPITAL
(Promoters Tirupati Balaji Educational Trust)
4, Fathpura, Udaipur | Phone : +91-294-3820000 +91-96729 78500 | Fax : +91-294-7491508
Email : pmchinfo@pacificalmedica.ac.in



Ref:Engg/WZO/Elect.

dt.23.08.2013

M/s KEI Industries Limited
101/102/103 Vastu Ship
Vastu Enclave
Jijmata Road
Andheri Pump House
Andheri (East)
Mumbai 400 093

Dear Sir

Re: Approval of 'KEI' brand wires and cables

We are pleased to inform you that as per your request the competent authority has approved inclusion of 'KEI' brand of wires and cables in our approved list of electrical materials to be used in our works under Western Zonal Office which consists state of Maharashtra, Gujarat and Goa.

You are requested to be in touch and forward us the latest price lists and update if any in terms of product/range/prices etc. from time to time.

Yours faithfully
Dy. Chief Engineer

पश्चिम क्षेत्रीय कार्यालय, "योगाक्षेम", जेवन बिमा मार्ग, मुंबई - 400 021.
दूरभाष : 022-65598000
पश्चिम क्षेत्रीय कार्यालय, "योगाक्षेम", जेवन बिमा मार्ग, मुंबई - 400 021.
दूरभाष : 022-65598000

Western Zonal Office, "Yogakshem", Jeevan Bima Marg, Mumbai - 400 021.
Tel: 022 - 65598000



KERALA STATE ELECTRICITY BOARD LIMITED
(O/o the Executive Engineer, Transmission Division, Kazhakkuttom, Kazhakkuttom P.O., Thiruvananthapuram)
Phone: 0471-2414838, 9446008107, E-mail - eedptvm @ bsnl.in

PERFORMANCE CERTIFICATE

Certified that M/S KEI INDUSTRIES LTD, D-90, PHASE-1 OKHLA INDUSTRIAL AREA NEW DELHI - 110 020 has successfully completed the supply, laying testing and commissioning of the cable 33 KV 3 C X 300 sq mm XLPE UG cable QTY-24.518 KMs along with accessories like Pre-moulded type straight joints. Pre-moulded type outdoor end terminations Turn-key basis on July-2013. The work was awarded to M/S KEI by the Chief Engineer (Transmission South), VB, TVM. Vide W.O. No. 4/CE(TS)/2012-13 Dt 3-08-2012 for our Sub Transmission Project from 110 KV substation NEDUMANGAD to VITHURA (IISER CAMPUS) Substation under this Division

The above 33 KV UG XLPE Cable system has been charged and working satisfactorily since October 2013.

Kazhakkuttom

Dtd-22.01.2015

EXECUTIVE ENGINEER



(Signature)
22/01/15
EXECUTIVE ENGINEER
Transmission Division
Kazhakkuttom, Thiruvananthapuram

APPROVED MAKE OF MATERIALS AND EQUIPMENTS
THE MATERIALS/ EQUIPMENTS TO BE INCORPORATED IN THE WORKS SHALL CONFORM TO ANY OF THE FOLLOWING APPROVED MAKES.

- | | |
|---|--|
| 1 Transformer | : Crompton/ Kirloskar/ETE/ ITL/ Voltamp/ KEL/ Bharat Bijlee/ INTRANS/ TELK/ AREVA |
| 2 H.T Breaker Panel | : Schneider Electric/ Crompton Greaves/ Jyothi Limited/ ABB Limited/ Siemens Limited/ Areva |
| 3 Gang Operating Switches | : Metropolitan/ Trans Electrical/ Golden |
| 4 Lighting Arrestors | : W.S Insulators/ KEL/ Lamco/ Areva/ Schneider Electric |
| 5 Moulded Case Circuit Breakers [MCCB] | : Larsen & Toubro/ GE Power/ Schneider/ Control & Switch Gear/INDO ASIAN/ABB/ Siemens |
| 6 Air Circuit Breakers | : Larsen & Toubro/ Siemens/ Control & Switch Gear/ GE Power/ Schneider Electric/ABB |
| 7a) Lighting Fixtures (Indoor) | : Philips/ Crompton/ Bajaj/GE lighting/ Wipro/ Asian/ K-lite |
| 7b) Lighting Fixtures (Outdoor) | : Bajaj/ Crompton/ GE lighting / Philips/ Wipro/ K-lite/ Pasolite |
| 8 Fluorescent tubes/ lamps | : Philips/GE/Wipro/OSRAM/Surya |
| 9 Switch fuse units and Isolators | : Crompton/ Siemens/ Larsen & Toubro/ Cutler Hammer/ Control and Switch Gear/ ELCON/ Schneider Electric/ ABB/ GE/ Areva / Indo Asian |
| 10 Changeover Switches | : Control and Switch Gear/ ELCON/ Schneider Electric/GE/Areva/ Indo Asian |
| 11 Metal clad socket with sheet steel enclosure [Industrial type] | : Crompton/ Cutler-Hammer/ Easun/ Havell's/GE Power/Schneider/ L&T/ Siemens/Control & Switch Gear/ ABB/ Indo Asian |
| 12 Copper conductor PVC insulated wires (with ISI mark) | : Cobra/ Finolex/ Havell's L&T/ Indo Asian |
| 13 Aluminium conductor PVC insulated wires (with ISI mark) | : SBEER/ Ravi Cab/ WIN Cab/ Polycab/ Incab/ Benteo |
| 14 Miniature Circuit Breakers | : MDS/Indo Asian/ Schneider Electric/ ABB/ L&T / Havell's/ Siemens/ Legrand |
| 15 HT/LT/Control Cables | : Gostec/RPG-Asian/ Universal/ ICL/ INCAB/ NICCOV/ Havell's/ Railison/ Primecab/CCI/ Gems Cab/ KEI |
| 16 Telecommunication Cables | : HCL/ DELTON/ Finolex/ Karnataka Telephone cables / Dooravani / Havell's |
| 17 Fan Fixtures | : Crompton/Khoisan/Almonard/Usha/Bajaj/ Orient |
| 18 Steel Conduits | : Any make with ISI mark (BIS certification) |

(Signature)
FOR ISSUING OFFICER:

SIGNATURE OF CONTRACTOR:

DIRECTORATE OF ELECTRICAL ENGINEERING



INTEGRATED HEADQUARTERS
MINISTRY OF DEFENCE (NAVY)
D-1 WING, SENA BHAVAN
NEW DELHI - 110 011
FAX : 011-23011212

FAX MESSAGE

TO	M/S CABLE CORPORATION OF INDIA LTD, MUMBAI (ATTN. MR. SK DESHMUKH, MANAGER (SALES))	FAX NO	022-66144111/13/14
	M/S UNIVERSAL CABLES LTD, NEW DELHI (ATTN. MR. SANDEEP KUMAR, SR. MANAGER (MARKETING))	FAX NO	011-23711561
	M/S KEI INDUSTRIES LTD, NEW DELHI (ATTN. MR. DEEPAK MANCHANDA)	FAX NO	011-26811959
FILE	EE/03/9620	DATE	09 FEB 11
TOTAL NO. OF PAGES : ONE			

INFORMATION ON CABLES - INDIAN NAVY

- THE CABLES SUPPLIED TO INDIAN NAVY/ SHIPYARDS (FOR USE ONBOARD IN SHIPS) ARE REQUIRED TO BE STORED FOR CONSIDERABLE PERIOD (SOMETIMES EXTENDING TO 5-6 YEARS) PRIOR ONBOARD USE. FURTHER, THESE CABLES ARE REQUIRED TO PERFORM SATISFACTORILY FOR 20-25 YEARS DEPENDING UPON THE MAIN SYSTEM.
- AT PRESENT, THE CABLE MANUFACTURERS DO NOT SPECIFY SHELF LIFE/ TOTAL LIFE OF THE CABLE. EVEN THOUGH, IMPORTANT CABLE PARAMETERS LIKE INSULATION RESISTANCE ETC ARE CHECKED BEFORE LAYING OF CABLES, SOME DEGRADATION IN CABLE PROPERTIES DUE TO EXTENDED STORAGE/ IMPROPER STORAGE CONDITIONS CANNOT BE COMPLETELY RULED OUT. IT IS THEREFORE INTENDED TO PROMULGATE GUIDELINES ON STORAGE/ REQUALIFICATION OF CABLES.
- IN VIEW OF THE ABOVE, IT IS REQUESTED THAT DETAILS/ COMMENTS REGARDING FOLLOWING BE FORWARDED TO HQ MOD(N)/DEE BY 20 FEB 11:-
 - RECOMMENDED MAX SHELF LIFE OF CABLE
 - EXPECTED TOTAL LIFE OF CABLE
 - RECOMMENDED STORAGE CONDITIONS
 - STORAGE PERIOD BEYOND WHICH REQUALIFICATION OF CABLES SHOULD BE UNDERTAKEN
 - RECOMMENDED PROCEDURE FOR REQUALIFICATION OF CABLES
- REGARDS.

DRAFTED BY

(Signature)
(SS SANDHU)
CDR
INFE

RELEASED BY

(Signature)
(ANUPRASTOGI)
CAPTAIN
INFE



IRCON INTERNATIONAL LIMITED
Civil, Mechanical, Electrical, Communications and Turnkey Contractors
(A Govt. of India Undertaking)

NO. IRCON/ELECT/GEN/69
Date: 29th Jan' 2013

PERFORMANCE CERTIFICATE

TO WHOM IT MAY CONCERN

This is to certify that M/s KEI Industries Ltd., have supplied Copper FRLS type with XLPE Insulated cables, 1.545 Kms of 26 /45 KV Grade 1c x 240 sq.mm, 0.883 Kms of 18 / 30 KV Grade 3c x 400 sq.mm and 2.160 Kms of 1 c x 240 sq.mm 3.3 KV Grade cables as per IEC 60840 & IEC 60502 Part-2 against our Purchase Order No. IRCON/5010/DMRC/ELECT/BE-8/HT CABLES/28/B Dt. 08-06-2009 of Rs. 58,42,709.00 for Delhi Metro Rail Project, Contract BE-8.

The cables have been used and so far performance of the cables is satisfactory.

For IRCON INTERNATIONAL LTD

(Signature)
(Dr. Subhash Chand)
General Manager/Elect



Regd. Office : C-4, District Centre, Saket, New Delhi-110017, INDIA
Tel. : +91-11-29505666 Fax : +91-11-26854000, 26522000
E-mail : info@ircon.org Web : www.ircon.org



IRCON INTERNATIONAL LIMITED
Civil, Mechanical, Electrical, Communications and Turnkey Contractors
(A Govt. of India Undertaking)

NO. IRCON/ELECT/GEN/69
Date: 29th Jan' 2013

PERFORMANCE CERTIFICATE

TO WHOM IT MAY CONCERN

This is to certify that M/s KEI Industries Ltd., have supplied Copper conductor XLPE Insulated FRLS Sheathed 9.225 Kms of 3.3 KV Grade UE 1c x 630 sq.mm and 3.131Kms of 11 KV Grade (E) 3c x 300 sq.mm cables as per IS : 7099 Part 2 on 30-9-2007 against our Purchase Order No. IRCON/ELECT/5011/KMRC/CABLES/08 Dt. 12-7-2007 of Rs. 3,89,79,880.00 for Kolkata Metro Rail Project.

The cables have been used and so far performance of the cables is satisfactory.

For IRCON INTERNATIONAL LTD

(Signature)
(Dr. Subhash Chand)
General Manager/Elect



Regd. Office : C-4, District Centre, Saket, New Delhi-110017, INDIA
Tel. : +91-11-29505666 Fax : +91-11-26854000, 26522000
E-mail : info@ircon.org Web : www.ircon.org

महाराष्ट्र गृहनिर्माण व क्षेत्रविकास प्राधिकरण
MAHARASHTRA HOUSING AND
AREA DEVELOPMENT AUTHORITY



No-MH/CE-1/EE-1/A/ 494 /2014
Date:- 25/01/2014

To,
M/S KEI Industries Limited
101/102/103, Vastu Ship,
Vastu Enclave, Andheri Pump House,
Jijamata Road, Andheri (E),
Mumbai-400 093.

Sub :- Approval of your product for use in MHADA Works.
Ref:- Your letter No-KEI/MUM/DT/2013-14, Dated-02/06/2014

Sir,
The following product manufactured by M/S KEI INDUSTRIES LIMITED is here
by approved for use in the works under MHADA

" KEI " Brand 1] PVC Insulated Cables for working Voltages upto and
including 1100 V IS: 694:1990 2] PVC insulated (heavy duty) electric
cable :Part 1 for working voltage up to and including 1100V ISI554(Part-
1: 1988 3] PVC insulated (heavy duty) electric cable :Part 2 for working
voltage from 3.3 kv up to and including 11kv ISI554(Part-2: 1988
4] Crosslinked polyethylene insulated pvc sheathed cables Part 2 for
working voltage from 3.3 kv up to and including 33kv IS 7098:Part
2:1985

The approval is given as per following terms & conditions.

1. The validity of this enlistment is for one year on experiment basis from the date of issue
of this letter. However, the MHADA reserves the right to cancel the same.

गृहनिर्माण धवन, कलानगर, बान्दे (पूर्व), मुंबई - ४०० ०९९.
दुराध्वनी : ६६४० ४०००
फैक्स नं : ०२२-२६९९ २०९६

Griha Niman Bhavan, Kalanagar, Bandra (East), Mumbai-400 051.
Phone : 6640 5000
Fax No. : 022-2699 2058 Website : www.mhda.maharashtra.gov.in

be kept valid and any changes in the same shall be intimated to this office.

3. The approval has been granted on the basis of documents/ information furnished by you.
The approval would be cancelled if any details are found in variance to the details already
furnished during the inspection of manufacturing unit MHADA reserves the right to visit the
manufacturing unit at any time.

4. The registration shall not bind MHADA to give you any priority or preference in the issue
of enquiry and placement of purchase orders and does not guarantee that all or any of the
enquiries for the above items would necessarily be sent to you.

5. The change in Postal address contact Phone No., Fax No., in the Constitution or working
of your firm if any to be intimated to this office immediately.

6. The applicant has to obtain the revalidation by applying 30 days prior to expiry of this
registration.

7. During the period of enlistment, if your company improve your product value by
acquiring additional quality accreditations and/ or achieves better financial performance,
then such changes shall be invariably informed to this office.

8. This approval will be renewed further on request of the firm & depending upon the
performance of product on MHADA works.

Yours Faithfully

Chief Engineer-1/A
MHADA



Haryana PWD (B&R)
O/O Superintending Engineer
Electrical, Circle PW (B&R) Deptt., Karnal
Email:- pwd-sekarnal@hy.nic.in
Phone no:- 0184-2266076
Fax no:- 0184-2266075

To

M/s KEI Industries Limited
D-90, Okhla Industrial Area, Phase-I,
New Delhi

Memo.No. 6077 /SR Dated:- 20-7-15

Sub :- Approval of Wires/LT Cables upto 1.1 KV/Aluminium copper cables, HT
Cables upto 33 KV & AB Cables for use of Haryana Govt. PWD B&R
Works.

As approved by the Committee constituted vide Chief Engineer (E&M)
Chandigarh letter no. 345 dated 22.05.2015 and meeting held on dated 4-6-2015, the following
items manufactured by your firm are allowed to be used in Haryana PW(B&R) Deptt.

Sr. No.	Name of Item	Brand Name
1	Wires/LT Cables upto 1.1 KV/Aluminium copper cables, HT Cables upto 33 KV & AB Cables	KEI

This approval is valid for one year only subject to satisfactory performance
of the product and can be reviewed by the approval committee. The department will be at
liberty to withdraw the approval at any time without assigning any reason.

CONDITIONS:-

- The price list /literature /drawing should be sent to the Deptt.
Periodically as and when rates are revised by the firm.
- The approval of ISI marked products shall be valid till the validity of ISI
certificate. The firms shall get their ISI certificate renewed from time to time. As soon as the
ISI certificate expires the approval of product shall be automatically considered as withdrawn.
However approval may be reviewed after submission of renewed ISI certificate.
- In case the companies/firms change their name/brand name of the
product, same shall be intimated immediately other wise the approval shall be withdrawn as
soon as it comes to the notice of department. In case approved models are discontinued or
replaced with new models. The approval of the product shall be considered automatically
withdrawn. New model shall have to be got approved a fresh.

4. The firm shall ensure that there is no difference in quality, design, shape
between the approved products and the product marketed by the company. In case, any change
in quality, design, shape of the product is done, the department should be informed
immediately. Further the firm shall maintain the quality of standards of its product range in
conformity with the document already submitted, failing to do so will lead to the cancellation
of this approval.

5. The firm shall stand warranty to replace every/any items of its product
range if found damaged/defective where so ever any needs arises at the inter stages without any
condition.

6. The firm shall assist the department on account of genuine trade
marking, if any need arises for its confirmation at later stage.

7. The department reserve the right to get any product tested at any time
without any information to the firm and in case the quality of product supplied by the firm
direct to the department or through any other source is not upto the mark, the same shall have
to be replaced with the genuine quality of product and the firm/product can be black listed for
future.

DA/ Nil

Superintending Engineer
Electrical Circle, PW (B&R) Deptt.,
Karnal

KIND ATTENTION OF C.E.(E&M)

Endst.No. /SR Dated:-

Copy of above is forwarded to the Engineer-in-Chief, Haryana PWD B&R
Deptt. Chandigarh for information.

DA/ Nil

Superintending Engineer
Electrical Circle, PW (B&R) Deptt.,
Karnal

Endst.No. /SR Dated:-

Copy of above is forwarded to the Executive Engineer Elect. Divn. PWD
B&R Branch Ambala/Gurgaon/Hisar/Karnal/Rohtak for information and necessary action.
They should intimate immediately if there is any thing adverse to say regarding working
performance of the product.

P.W.D. Deptt., Govt. of Maharashtra,
Bandhikam Bhavan, 3rd floor,
Marzban Road, Fort,
Mumbai-400 001.

Website : www.mahapwd.com
Email : elmumbai.ce@mahapwd.com
No.CE/Elec/Desk-3/IDM/227/2014.

Telephone : (022) 22013415/16/17
Fax : (022) 22016900
Date : 22.05.2014

To,
M/s. KEI Industries Ltd.
101/102/103, Vastu Ship, Vastu
Enclave, Andheri Pump House,
Jijamata Road, Andheri (E),
Mumbai-400 093

Sub : Approval to use material on works carried out by Government of Maharashtra.
Ref : 1) Your Letter No.MUM/DT/2013-14 Dated 19.03.2014
2) This Office Letter No. C.E.(Elec.)/Desk/3/224/2014 Date 25.03.2014
3) Factory Visit Dated 5.04.2014
4) Test Report of MSME Testing Station, Hyderabad - 500 018
Report No.1)39231 Date-05.09.2014, 2)39230 Date-05.09.2014

Sir,
The subject proposal submitted by you was examined by this office and now the undersigned is pleased to accord approval to the following materials for using it on works carried out by Government of Maharashtra W.E.F. the date of issue of this letter:

Name of material : " Wires & Cables "
Place of manufacture : SP 920, Phase-III, RICO Industrial Area, Bhiwadi, Distt.-Alwar(Rajasthan)
Brand Name : "KEI"
Technical Specifications of the Materials :

Sr.No.	Name of Product	Validity
1	PVC insulated Wires & Cables for working voltage upto and including 1100V	Up to 31 st August 2017
2	Crosslinked polyethylene insulated PVC sheathed cables : Part 1 for working voltage upto and including 1100V	
3	Crosslinked polyethylene insulated PVC sheathed cables : Part 2 for working voltage from 3.3 kV upto and including 33kV	

Manufactured as per ISI No. : For item No. For item No 1) IS : 694-1990, 2) IS : 7098 (Part 1) : 1988 / IS : 1554 (Part 1) : 1988 For item No3) IS:7098 (Part 2) : 1985 / IS 1554 (Part 2)
Whether having ISI No : NO
License No. : Nil
Whether covered by House hold Electrical : N.A.
Manufacturing Certificate No. : N.A.
Validity : N.A.
Authority to issue M.C. : N.A.

The above approval given subject to the performance of the material during this period remains satisfactory. In case of unsatisfactory performance, the approval accorded shall be with drawn forthwith.

Yours faithfully,

(S.A.Patil)
Chief Engineer (Elect.)
P.W.D., MUMBAI-1.

Copy forwarded to Superintending Engineer Regional Elec. Circle MUMBAI / PUNE /AURANGABAD / NAGPUR / AMRAVATI / NASHIK for information.

VANDANA GLOBAL LTD.

Industrial Growth Centre, Phase-II, Silsara, Raipur-493111(C.G.)
Phone No. : 07721-264244, 407250, 407755
Fax: 07721-264243, 407253,
E-mail: vjg@purchase.vandanaglobal.com



PURCHASE ORDER

VENDOR DETAILS		INFORMATION	
21816	KEI INDUSTRIES LTD	PLANT : TMT Rolling Mill	
D-40		PO NO. : 4530019520	DT 14.02.2014
		AMD NO. : 0	DT 14.02.2014
		FILE NO. : 1-80	
		P.F.NO. : 3016660	DT 14.02.2014
DELHI	CONTACT : KATARIYA	OFFER NO. :	
	TELMOB : 01126818840 / 0926123445	CS NO. :	
	FAX : 01126818840	OLD PO REF : NEW P.O.	
	E-MAIL : Kvi.katariya@kei-ind.com	PRINT DATE & TIME : 14.02.2014 / 15:36:09	
	TOP AUTHORITY/NEGOTIATOR :		

With reference to Verbal/telephonic discussions our Mr. Banjeet Choudhary had with you we are pleased to place our order on you for the following as per terms & conditions mentioned below :-

SL	CODE	DESCRIPTION	QTY	UOM	RATE	NET VALUE
01		4CX2 SQMM 2XFY.1.1KV-LT POWER CABLES-CO	400	M	280.00	33,600.00
MAKE:KEI INDUSTRIES						
		Basic Price			112,000.00	
		Discount %			79,400.00	
		Excluse duty 12.360 %			4,152.96	
						4,152.96
02		4CX4SQMM 2XFY.1.1KV-LT POWER CABLES-COPP	350	M	389.00	40,845.00
MAKE:KEI INDUSTRIES						
		Basic Price			136,150.00	
		Discount %			70.00	
		Excluse duty 12.360 %			5,048.44	
						5,048.44
03		4CX6SQMM 2XFY.1.1KV-LT POWER CABLES-COPP	200	M	543.00	32,580.00
MAKE:KEI INDUSTRIES						
		Basic Price			106,600.00	
		Discount %			70.00	
		Excluse duty 12.360 %			4,026.89	
						4,026.89
04		4CX10SQMM 2XFY.1.1KV-LT POWER CABLES-COP	300	M	847.00	76,230.00
MAKE:KEI INDUSTRIES						
		Basic Price			254,100.00	
		Discount %			70.00	
		Excluse duty 12.360 %			9,422.03	
						9,422.03
05		4CX16SQMM 2XFY.1.1KV-LT POWER CABLES-COP	200	M	1,221.00	73,260.00
MAKE:KEI INDUSTRIES						
		Basic Price			244,200.00	
		Discount %			70.00	
		Excluse duty 12.360 %			9,054.93	
						9,054.93

For, Vandana Global Ltd.

Prepared by : Head Office: Vandana Bhawan, M.G. Road, Raipur-492001 Phone No. 0771-2535405, 407777 & Fax: 0771-2535804, 4265491
Authorised Signatory

PO NO. : 4530019520 DT : 14.02.2014

TOTAL 288,220.25
In Words : Rupees Two Lakh Eighty Eight Thousand Two Hundred Twenty and Twenty Five Paise Only

TERMS & CONDITIONS

- Price Basis : VGL Silsara
- Delivery Due On : 25.02.2014
- Freight : Paid Basis
- Mode of Despatch : YOUR SCOPE
- Insurance : Not Applicable
- Order Validity : ONE Month
- Order Validity Date : 20.03.2014
- Weightment : At VGL Silsara Raipur Weightment will be Final
- Analysis/Quality Test : Inspection Report of VGL will be FINAL
- Penalty : Not Applicable
- Payment Terms : 20% ADVANCE & BALANCE AGAINST P.I.
- Guarantee : FREE REPLACEMENT AGAINST MANUFACTURING DEFECTS.
- Specific conditions : EXCISE EXTRA,CST-NIL AGAINST C FORM.
- Challan Details : Kindly Provide Challan details in Bill.
- Billing : All bills are to be sent to VGL, Works only.
- Annexures Enclosed : 01 NO. (ANNEXURE-1) Printed overleaf
- Billing Address : Purchase Department, VANDANA GLOBAL LTD, SILSARA.
- Challan details and Invoice : You are required to submit challan & invoice in Triplicate with all the details of P.O. material, qty etc failing which material will not be accepted.

OUR TAX DETAILS

LST No. : 10/03/59318/S	DATE : 15.10.99
CST No. : 10/03/5017/C	DATE : 15.10.99
ECC RANGE : II, Civil Lines, RAIPUR(C)	
ECC No. : AAACV2018EXM 001	
DIVISION : Civil Lines, RAIPUR(C.G.)	COMMISSIONERATE : RAIPUR(C.G.)
TIN No. : 22221901234	

For, Vandana Global Ltd.

Prepared by : Head Office: Vandana Bhawan, M.G. Road, Raipur-492001 Phone No. 0771-2535405, 407777 & Fax: 0771-2535804, 4265491
Authorised Signatory

MARUTI BUSINESS PARK,

G.E. ROAD

Purchase Order



Business Unit : AVINASH DEVELOPERS PVT. LTD.-H/O : RAIPUR

POJGA TRADERS	Order No. : POJGA/0616114-18	Mode of Transport : By Road
	Provisional PO Doc No. : 18022915	Delivery Address : AVINASH DEVELOPERS PVT. LTD.-H/O RAIPUR
Pin : 492001	Order Date : 18/02/2015	
	Quotation No. :	Contact Person : Mr. Satish Ansh
	Quotation Date :	Tele : 08302739847
	Head Office :	

Please supply the following items in accordance with your Quotation and subject to following terms and conditions.						
#	Item Code	Description	Unit	Quantity	Rate	Amount
1	-1297	PVC INSULATED COPPER PR CABLE 1 SQMM BLACK	MTR	27,900.000	5.300	139,260.00
2	-1298	PVC INSULATED COPPER PR CABLE 1 SQMM RED	MTR	27,900.000	5.300	139,260.00
3	-1299	PVC INSULATED COPPER PR CABLE 1 SQMM YELLOW	MTR	24,300.000	5.300	121,300.00
4	-0331	PVC INSULATED COPPER PR CABLE 1.5 SQMM BLACK	MTR	26,200.000	7.440	195,028.00
5	-0326	PVC INSULATED COPPER PR CABLE 1.5 SQMM BLUE	MTR	900.000	7.440	6,696.00
6	-0330	PVC INSULATED COPPER PR CABLE 1.5 SQMM GREEN	MTR	25,300.000	7.440	188,028.00
7	-0327	PVC INSULATED COPPER PR CABLE 1.5 SQMM RED	MTR	24,600.000	7.440	183,470.40
8	-0332	PVC INSULATED COPPER PR CABLE 1.5 SQMM YELLOW	MTR	2,700.000	7.440	20,088.00
9	-1445	PVC INSULATED COPPER PR CABLE 1.5 SQMM GREY	MTR	2,800.000	7.440	21,427.20
10	-0336	PVC INSULATED COPPER PR CABLE 2.5 SQMM BLACK	MTR	27,300.000	11.970	327,499.20
11	-0276	PVC INSULATED COPPER PR CABLE 2.5 SQMM GREEN	MTR	26,800.000	11.970	249,933.60
12	-0334	PVC INSULATED COPPER PR CABLE 2.5 SQMM RED	MTR	27,720.000	11.970	331,904.40
13	-0310	PVC INSULATED COPPER PR CABLE 4 SQMM BLACK	MTR	3,700.000	17.940	67,423.20
14	-0317	PVC INSULATED COPPER PR CABLE 4 SQMM RED	MTR	3,700.000	17.940	67,423.20
15	-0719	PVC INSULATED COPPER PR CABLE 6 SQMM BLACK	MTR	18,300.000	26.900	493,084.00
16	-0718	PVC INSULATED COPPER PR CABLE 6 SQMM RED	MTR	18,300.000	26.900	493,084.00

BASIC	3,049,311.60
ROUND OFF (+/-)	0.40
Three Million Forty Nine Thousand Three Hundred Twelve Only	3,049,312.00

For AVINASH DEVELOPERS PVT. LTD.

Authorised Signatory

Remarks : Please Quote Order No. Item Code on all Bills/Challans

THIS PURCHASE ORDER IS SUBJECT TO JURISDICTION OF THE RAIPUR HIGH COURT ONLY.

Continued

AVINASH DEVELOPERS PVT. LTD.
 MARUTI BUSINESS PARK,
 NEAR DHURUPA PETROL PUMP,
 G.E. ROAD
Purchase Order
 Business Unit: MARUTI LIFESTYLE - KOTA ROAD, BEHIND R.K. MALL, GE ROAD - RAIPUR


avinash
 Creating Lifestyles

POJUA TRADERS
 Pin: 492021

Order No: P09859999913-14
 Provisional PO Doc No: 15102993
 Order Date: 08-APR-2014
 Quotation No: 15102993
 Quotation Date: 08-APR-2014
 Kind Attention:

Made of Transit: By Road
 Delivery Address: MARUTI LIFESTYLE, KOTA ROAD, BEHIND R.K. MALL, GE ROAD, RAIPUR
 Contact Person: Mr. JAGDEESH
 Tel: 8085137899

Please supply the following items in accordance with your Quotation and subject to following terms and conditions.

#	Item Code	Description	Unit	Quantity	Rate	Amount	Indst No.	Delivery Dt
1	-3725	11 KV HT CABLE 120 SQM X 3 CORE	MTR	3,000.000	808.000	2,418,000.00	INDMS/00785/1	26-10-2013
		11KV 3COREX120SQMM -10 X 120SQMM MESSENGER AERIAL BUNDLED CABLE						
		MAKE- KEI						
2	-3726	11 KV HT CABLE 240 SQM X 3 CORE	MTR	200.000	1,017.000	203,400.00	INDMS/00785/1	26-10-2013
		XLPE CABLE						
		BASIC				2,621,400.00		
		Total Order Value:				2,621,400.00		

Rupees Twenty Six Lacs Twenty One Thousand Four Hundred Only

Terms & Conditions:
 01) RATES ARE ED & VAT PAID
 02) FOR TO SITE
 03) JOB DETAILS SEND BY YOU.

For AVINASH DEVELOPERS PVT. LTD.
 Authorized Signatory
 Remarks: Please Quote Order No, Item code and all Bill Charges
 THIS PURCHASE ORDER IS SUBJECT TO JURISDICTION OF THE RAIPUR HIGH COURT ONLY.


BEC
 BHILAI ENGINEERING CORPORATION LIMITED

Tax Invoice to be raised in the name of:
 Bhilai Engineering Corporation Ltd 4/5 Industrial estate, Nandini Road Bhilai Chhattisgarh INDIA 490026
WEBSITE:

All Documents/Correspondence to be sent to:
 Bhilai Engineering Corporation Ltd 4/5 Industrial estate, Nandini Road Bhilai Chhattisgarh INDIA 490026
PHONE:

PURCHASE ORDER
 Order No. & Date : PRJ/MAT/7339 08-APR-2014

Supplier : KEI Industries Ltd. (K110)

Address : SURVEY No 862/77 Madhuban Ind. Estate Vid-Rashtri

Reference : Your Qtn Ref. No. KEI/MUMQ-2128/2013-14 R-2 dt 05.04.2014 for BSP COB#11 Battery & CDCP Area. (As per billing schedule item)

Please supply/Provide services the following items conforming to the specifications and terms/conditions given:

Sl. No	Part Number	Part Description	Qty	Unit	Disc (%)	Unit Price	Amount
1	2601000078	Power Cable 3.5 C X 70 sq. mm, XLPE AL	2,400.000	m		189.20	4,54,080.00
2	2602000125	Armoured, 1.1 KV Grade LT	1,000.000	m		242.90	2,42,900.00
3	2601000078	Control cable 24 C X 1.5 sq. mm, XLPE, Cu, PVC sheathed, armoured, 1.1 KV Grade	2,000.000	m		304.40	6,08,800.00
4	2601000078	Power Cable 3.5 C X 120 sq. mm XLPE AL	700.000	m		444.50	3,11,150.00
5	2601000078	1.1 KV Grade LT XLPE AL Armoured Power Cable 3.5 C X 185 sq. mm	2,000.000	m		554.60	11,09,200.00
6	2602000003	Power Cable 3.5 C X 240 sq. mm, XLPE AL	4,500.000	m		65.80	2,96,100.00
7	2601000045	Copper Armoured Cable 3 C X 2.5 sq. mm XLPE, 1.1 KV Grade LT	4,225.000	m		71.10	3,00,388.00
		Total					33,22,628.00

Delivery Terms : Delivered Freight Paid
Mode of Shipment : Road Transport

Consignee : DGM Projects COB #11 Coke-Oven area SAIL BSP Bhilai Chhattisgarh INDIA 490001

Grand Total **36,64,859.00**

₹(Rs.) Thirty-Six Lac Sixty-Four Thousand Eight Hundred Fifty-Nine And Zero Paise Only

Our Statutory Info
 PAN GIR No. : AAACB9272A
 CST No. : 13/04/0005C
 LST No. :
 TIN No. : 2283300290
 ECC No. :
 Excise Range : Range-II
 Division : II
 Service Tax Regn. :

Prepared By : PO Creator Group
Authorized By : R K Wali
Purchase Order creator group 01
Registered office : Hathkholi Industrial Area Bhilai Chhattisgarh India 490026
Page 1 of 2


BEC
 BHILAI ENGINEERING CORPORATION LIMITED

Tax Invoice to be raised in the name of:
 Bhilai Engineering Corporation Ltd 4/5 Industrial estate, Nandini Road Bhilai Chhattisgarh INDIA 490026
WEBSITE:

All Documents/Correspondence to be sent to:
 Bhilai Engineering Corporation Ltd 4/5 Industrial estate, Nandini Road Bhilai Chhattisgarh INDIA 490026
PHONE:

PURCHASE ORDER
 Order No. : PRJ/MAT/7339 Date : 08-APR-14 Billable

Despatch Documents Required
 1) Consignee copy of consignment note. Delivery challan in duplicate. Duplicate for transporters copy for CENVAT credit. Packing list & Copy of Commercial Invoice.
 2) Goods will be dispatched only on receipt of Despatch Clearance from us.

Drawing Approval
 You will submit Cable data sheet for MECON approval within 03 days from the date of receipt of Purchase Order.

Documents Required for Payment
 Invoice in Triplicate, Copy of Despatch Clearance.

Erection and Commissioning
 N/A.

Freight
 To be borne by you.

Guarantee/Warranty
 The Cable shall have Warranty for Capacity, Performance & Reliability for a period of 12 months from the date of Commissioning or 18 months from the date of supply whichever is earlier.

Inspection Documents Required
 Routine Test Certificates, Type Test Certificate & Warranty Certificates required.

Inspection Agency
 Our Representative / Customer's Representative / MECON Representative

Mode of Payment
 Through LC.

Packing Instruction
 Suitably packed to avoid any transit loss. Specific handling and storage instruction must be prominently marked on each Cable drum, Identification of each Cable Drum and consignment should also be marked.

Place of Inspection
 At your works

Terms of Payment
 100% payment with full taxes & duties shall be released against irrevocable letter of credit from nationalized Bank with 90 days usage and equal sharing of interest (45- 45 days credit) LC shall be open at the time of inspection of ordered material after cleared inspection. LC opening charges to our account and negotiation charges to your account.

Notes
 # CST-Nil against Form-C
 # All cables should be KEI Make only.
 # Delivery Schedule : 4 Weeks from the date of receipt of approved Cable data sheet.
 # You will take manufacturing action after receipt of approved Data sheet.
 # Please send order acceptance to Mr. Umesh Chandra, Email ID - umesh.chandra@bec-group.com, Mob no - 0922957214, within 3 working days after receipt of order.
 # Correspondence after order acceptance to be addressed to Mr. A.K.Soni, Email ID: ashwani.kumar@bec-group.com, Mob- 09229272506.
 # Contact Person of M/S KEI Industries Limited : Mr. Kohli (Sr.Manager-Nagpur-Division) Mob-06822473774 and Mr.Kirti Kataria (Manager-Marketing-Raipur) Mob-09626123445.

Jurisdiction - The district court of Durg, Chhattisgarh shall have exclusive jurisdiction in all matters of dispute.

Arbitration :-
 i) Any dispute arising out of the contract shall be settled through arbitration only.
 ii) The arbitration shall be governed by Arbitration and Conciliation Act 1996. The language of arbitration shall be English.
 iii) The sole arbitrator shall be appointed by the MD of M/s Bhilai Engineering Corporation Ltd. The venue of the arbitration shall be Bhilai.

Prepared By : PO Creator Group
 Authorized By : R K Wali
 Purchase Order creator group 01
 Registered office : Hathkholi Industrial Area Bhilai Chhattisgarh India 490026

PURCHASE ORDER / WORK ORDER

77 DEIFY INFRASTRUCTURES LTD.
 SALTARA GROWTH CENTRE
 INDUSTRIAL AREA, SALTARA
 RAIPUR (C.G.)

LEGAM TELE/FAX

CIN : XXXXXXXXXXXXXXXXXX
 ECC NO. :
 CGST NO. :
 CGST DT. :
 CST NO. :
 CST DT. :
 TIN NO. : 22421405475
 C I N : U45203BH1991PLC062494

DEI883 KEI INDUSTRIES LTD.
 D-90 OKHLA INDL AREA
 PHASE - I
 NEW DELHI-110020
 PAN NO. :

ORDER NO. 620426
 ORDER DT. 26/11/2014
 PRM NO. 000000/
 PRM DT. 02/09/5000

REFERENCE TO OUR ENQUIRY/YOUR QUOTATION NO. DT. YOU ARE
 ED TO SUPPLY FOLLOWING MATERIALS AS PER GIVEN TERMS & CONDITIONS.

AT CD.	DESCRIPTION	UM	RATE	QUANTITY	VALUE
4499407	14C X 1.5 SQ.MM CU.CABLE	MTR	170.00	7000.000	1190000.00
1004014	10CK1.5 SQ MM PVC COPPER CABLE	MTR	128.00	1000.000	128000.00
844	PROJECTS	SMS-II		TOTAL	1318000.00

Continue...

TECHNICAL SPECIFICATION :
 1.1 KV GRADE, ARMOURD COPPER CABLE, YWY, EXTRUDED PVC TYPE-A INSULATED. CONDUCTOR SHOULD BE STRANDED TINNED COPPER CONDUCTOR AS PER IS:1554-1988.

PRICE BASIS: FIRM & F.O.B. AT OUR SITE/STORES AT SALTARA INCLUSIVE OF P&F CHARGES AND FREIGHT & TRANSIT INSURANCE CHARGES BUT EXCLUSIVE OF ED & GST

MS & CONDITIONS
 1) DELIVERY AT :
 2) SCOPE COVERED BY PARTY/US :
 3) UNLOADING CHARGES :
 4) FORWARDING CHARGES :
 5) IN & COMMISSIONING :
 6) DISCOUNT ON TTL. VALUE :
 7) PAYMENT TERMS :

SUBJECT TO CONFIRMATION WITHIN 15 DAYS FOR THE GIVEN DELIVERY TERMS.

PLEASE QUOTE OUR P.O. NO. & DATE ON YOUR DELIVERY CHALLAN & INVOICES
 EXCISE GATE PASS TO BE SENT ALONGWITH CONSIGNMENT NOTE
 EXCISE G.P. NO. & DATE IN CHALLANS / INVOICES

Prepared By : PO Creator Group
 Authorized By : R K Wali
 Purchase Order creator group 01
 Registered office : Hathkholi Industrial Area Bhilai Chhattisgarh India 490026



JINDAL STEEL & POWER LIMITED (UNIT-I)

P-0427 A 1 (01) 00108-03

POST BOX NO. 16, KHARISA ROAD
RAIGARH - 496001 (C.G.), India
Ph: 027001-45 Fax: 027001-03
PURCHASE ORDER

Vendor: 13455
KEI INDUSTRIES LIMITED
90/27
MACHUBAN INDUSTRIAL ESTATE,
VILLAGE : RAHOLI
SILVASSA - 396240
Dadra and Nagar Havel, India
Sales Person / Tel No : /
Fax: 0260 2645896 Email: kati.kateriya@kei-ind.com

PURCHASE ORDER No: 4511019097
Purchase Order Date: 12.02.2015
Contact Person : BARUN KAFLEY (BLOCK)
Email: B.kafley@jstpl.com
Phone No: 07762-227061-05/60257
Fax: 07762-227023
Mobile No: 8827478039
LST NO. : 011/RGH/RGH0021/1 DT: 23.05.1991
CST NO. : RGH/RGH/V756-C DT: 05.12.1988
TIN NO. : 22484901419
Excise Range : RAIGARH-I
Excise Division : RAIGARH(CG)
Excise Commissionerate : BILASPUR(CG)

Please supply the following material as per the terms and conditions mentioned below and as per attached annexure-01

Item	Material #	Material Description	Qty	UOM	Unit Price	Discount	Net Amt (INR)
10	1000001595	WIRE, DOMESTIC, CU, PV C, 1.5MM2#	7,650.000	M	7.59		58,063.50
Item Text2 WIRE, APPLICATION: DOMESTIC WIRING MATERIAL CONDUCTOR COPPER MATERIAL INSULATION: POLY VINYL CHLORIDE, CROSS SECTION CONDUCTOR: 1.5MM2 MAKE: KEI HOME CAB FR 1.5 Taxes : ED12%EC2%HEC1%(CENVAT) CST NIL (FORM-C) Delivery Date Delivery Qty 30.03.2015 3,060.000 M 30.05.2015 2,295.000 M 30.06.2015 2,295.000 M Unloading Point: General Plant (UNIT-1) RAIGARH 20 1000001594 WIRE, DOMESTIC, CU, PV C, 1.00MM2# 4,140.000 M 5.09 21,072.60 Item Text2 WIRE, APPLICATION: DOMESTIC WIRING MATERIAL CONDUCTOR COPPER MATERIAL INSULATION: POLY VINYL CHLORIDE, CROSS SECTION CONDUCTOR: 1.00MM2 KEI HOME CAB FR 1.00 SQMM. Taxes : ED12%EC2%HEC1%(CENVAT) CST NIL (FORM-C) Delivery Date Delivery Qty 30.03.2015 2,070.000 M 30.07.2015 2,070.000 M Unloading Point: General Plant (UNIT-1) RAIGARH 30 1000001592 WIRE, DOMESTIC, CU, PV C, 1.02.5MM2# 8,550.000 M 12.22 104,481.00 Item Text2 WIRE, APPLICATION: DOMESTIC WIRING MATERIAL CONDUCTOR COPPER, NUMBER OF CORE: 1C, MATERIAL INSULATION: POLY VINYL CHLORIDE, CROSS SECTION CONDUCTOR: 2.5MM2 KEI HOME CAB FR 2.5SQMM Taxes : ED12%EC2%HEC1%(CENVAT) CST NIL (FORM-C)							

for JINDAL STEEL & POWER LIMITED



Continuation Sheet...
PO No : 4511019097
Pur Qp: 110

Item	Material #	Material Description	Qty	UOM	Unit Price	Discount	Net Amt (INR)
40	1000001554	CABLE, NON ARMOURD, MATERIAL CONDUCTOR COPPER, NUMBER OF CORE: 3C, CROSS SECTION, CORE: 1.5MM2, ADDITIONAL INFORMATION: TRAILING CABLE, TYPE: FLEXIBLE CABLE, N-ARM, PVC, CU, 3C, 1.5MM2, 1.1KV#	10,200.000	M	26.13		266,526.00
Item Text2 CABLE, NON ARMOURD, MATERIAL CONDUCTOR COPPER, NUMBER OF CORE: 3C, CROSS SECTION, CORE: 1.5MM2, ADDITIONAL INFORMATION: TRAILING CABLE, TYPE: FLEXIBLE Taxes : ED12%EC2%HEC1%(CENVAT) CST NIL (FORM-C) Delivery Date Delivery Qty 30.03.2015 5,100.000 M 30.06.2015 5,100.000 M Unloading Point: General Plant (UNIT-1) RAIGARH 50 1000001538 CABLE, N-ARM, PVC, CU FLAT, 3C, 2.5MM2# 1,800.000 M 42.95 77,310.00 Item Text2 CABLE, ELECTRICAL; TYPE: FLAT, NON-ARMOURD, CONDUCTOR INSULATION: PVC, CONDUCTOR MATERIAL: COPPER, NUMBER OF CORE: 3 CORE, CONDUCTOR DIAMETER: 2.5 MM2 Taxes : ED12%EC2%HEC1%(CENVAT) CST NIL (FORM-C) Delivery Date Delivery Qty 30.03.2015 1,800.000 M Unloading Point: General Plant (UNIT-1) RAIGARH 60 1000001590 CABLE, N-ARM, PLEX, PVC, CU, 4C, 2.5MM2# 6,500.000 M 55.37 359,905.00 Item Text2 CABLE, NON ARMOURD, MATERIAL CONDUCTOR COPPER NUMBER OF CORE: 4C, CROSS SECTION, CORE: 2.5MM2, ADDITIONAL INFORMATION: TYPE: FLEXIBLE Taxes : ED12%EC2%HEC1%(CENVAT) CST NIL (FORM-C) Delivery Date Delivery Qty 30.06.2015 6,500.000 M Unloading Point: General Plant (UNIT-1) RAIGARH							
Net Value (INR)							887,358.10
BED							105,482.97
ECESS							2,129.64
HECESS							1,064.84
Gross Total							997,035.55

TOTAL AMOUNT IN WORDS : NINE LAKH NINETY-SEVEN THOUSAND THIRTY-FIVE AND FIFTY-FIVE PAISE ONLY

for JINDAL STEEL & POWER LIMITED

Page 2 of 3

(Authorized Signatory)

VANDANA GLOBAL LTD.

PO NO. : 4530019520 DT : 14.02.2014

TOTAL		288,220.25
In Words : Rupees Two Lakh Eighty Eight Thousand Two Hundred Twenty and Twenty Five Paise ONLY		
TERMS & CONDITIONS		
1 Price Basis	: VGL Sitara	
2 Delivery Due On	: 25.02.2014	
3 Freight	: Paid Basis	
4 Mode of Despatch	: YOUR SCOPE	
5 Insurance	: Not Applicable	
6 Order Validity	: ONE Month	
7 Order Validity Date	: 20.03.2014	
8 Weightment	: AT VGL Sitara Raipur, Weightment will be Final	
9 Analysis/Quality Test	: Inspection Report of VGL will be FINAL	
10 Penalty	: Not Applicable	
11 Payment Terms	: 20% ADVANCE & BALANCE AGAINST P.I.	
12 Guarantee	: FREE REPLACEMENT AGAINST MANUFACTURING DEFECTS.	
13 Specific conditions	: EXCISE EXTRA, CST-NIL AGAINST C FORM	
14 Challan Details	: Kindly Provide Challan details in Bill	
15 Billing	: All bills are to be sent to VGL, Works only	
16 Annexures Enclosed	: 01 NO. (ANNEXURE-I) : Printed overleaf.	
17 Billing Address	: Purchase Department, VANDANA GLOBAL LTD, SILTARA.	
18 Challan details and Invoice	: You are required to submit challan & invoice in Triplicate with all the details of P.O. material, qty etc failing which material will not be accepted.	
OUR TAX DETAILS		
LST No. :	1003/5931/8/5	DATE : 15.10.99
CST No. :	1003/5317/C	DATE : 15.10.99
EXC. RANGE :	II, Civil Lines, RAIPUR(C.G.)	
ECC No. :	AAACV09MEXM 301	
DIVISION :	Civil Lines, RAIPUR(C.G.)	COMMISSIONERATE : RAIPUR(C.G.)
TIN No. :	22221601234	

For, Vandana Global Ltd.

Prepared by: Head Office: Vandana Bhawan, M.G. Road, Raipur-492001 Phone No. 0771-2535405, 4207777 & Fax: 0771-2535804, 4265491
Authorised Signatory



Larsen & Toubro Limited, Construction.

PB No 979, Mount-Poonamallee Road, Manapakkam, Chennai 600089, Tamilnadu, India

SCM Purchase Order - E4978PO4000012 - Project and Domestic - Dt.04-Mar-2014

Job	1 LE190524 - PT - H-JE-eBOP 2x500MW DB TPP, Chatisgarh, LT Power-IU	HR Number	1 E4978PMR4000012 DT: 25-Jan-2014
LST Reg No	1 11-01-5892-S, 14.08.2001	CST Reg No	1 11-01-3432-C, 14.08.2001
Our Ref	1 E4978OPR4000015 DT: 01-Mar-2014	Your Ref	1 E4978OPR4000015/2 DT: 03-Mar-2014
Vendor	1 VCK00218 - KEI INDUSTRIES LIMITED D-90, OKHLA INDUSTRIAL AREA (PHASE - I), NEW DELHI, DELHI INDIA, 110020, MR.MANOJ KAKKAR, (011) 2681-6840 / 098200, (011) 681-1959 jainind@vsnl.com, AAACK0251C		
Delivery Warehouse	1 1857 - eBOP 2x500MW DB TPP, Chatisgarh LT Power, Larsen & Toubro Ltd, eBOP 2x500MW DB TPP, Chatisgarh LT Power, Vill : Baradarda, Dist: Janjgir - Champa, CHHATTISGARH, India		
Delivery Period From	1 04-Mar-2014 To 30-Apr-2014	LD Clause	1 Applicable
Delivery Term	1 AT OUR SITE STORES	Payment Centre	1 Shared Service Centre - Accounting Center
Created By	1 SANTANU SAMANTA DT: 04-Mar-2014	Auth By	1 DEVENDRA KUMAR SINGH DT: 04-Mar-2014 DURGAPADA KUTTY DT: 04-Mar-2014
Remarks	1 Excise Duty is exempted against PAC. All terms & Conditions shall remain same as per the attached documents, Annexure A & Annexure B.		
Payment Terms	1 Stage -1. 90.00% After the Receipt of Materials within 90 Days by Cheque 1 Stage -2. 10.00% After the Submission of Performance BG within 90 Days by Cheque		

Material Details							Values In : INR	
Sl.No	Material	Amd No	UOM	Quantity	Basic Rate	Net Rate	Amount	
1	732320042 1CX 4.0 SQMM PVC CU WIRE	0	m	98000.000	18.62	18.8200	1844360.00	
2	770837907 1Cx2.5 sq.mm PVC lighting wire	0	m	74000.000	12.82	12.8200	948680.00	
Total Items : 2							2,79,30,40.00	
PO Net Value : (Indian rupee Twenty-Seven Lakh, Ninety-Three Thousand and Forty and Zero Paise Only)								

Material Wise Tax Breakup				Tax %		Value
Material Description	Tax Rate Components					
732320042 - 1CX 4.0 SQMM PVC CU WIRE	Sales Tax - Central Sale tax with Forms-C & E1 - CST with C Form @ 0% Dadra and Nagar Havel			0.00		0.00
770837907 - 1Cx2.5 sq.mm PVC lighting wire	Sales Tax - Central Sale tax with Forms-C & E1 - CST with C Form @ 0% Dadra and Nagar Havel			0.00		0.00



JAYASWAL NECO INDUSTRIES LIMITED (MINING DIVISION)

City office: Village :- Bankheta, Near at Doganoha, P.O. - Mitapara
Raigarh - 496 001 (C.G.)
Telephone. No. 09301949801, Fax : 07762 - 232958

Ref: JNIL /PUR/LOI/03/
Date: 18.11.2013

M/s KEI Industries Ltd,
E6, Anand Niketan
P.O. Shankar Nagar,
RAIPUR (C.G.) 492 007
Ph.No. 9926123445

Sub: Letter of Intent for supply of Mining Cable
Ref: Your e-mail offer dtd 17th October 2013

Dear Sirs,

With reference to the above and subsequent discussions we had with you, we are pleased to place our Letter of Intent on you for supply of following item as per the rates, terms and conditions mutually agreed

S.No	Item description	Qty	Rate/unit	Total value
1.	3Cx50sq.mmPVC Copper Conductor cable 3.3KV grade, double Round wire armoured , DGMS approved.	500 Mtrs	1045.00	5,22,500.00
2	3Cx25sq.mmPVC Copper Conductor cable 3.3KV grade, double Round wire armoured , DGMS approved.	1000 Mtrs.	565.00	5,65,000.00
	Total basic value			10,87,500.00
	Excise duty @ 12.36%			1,34,415.00
	CST @ 2%			12,219.15
	Total value			12,34,134.15

Terms & Conditions

- Price basis : F.O.R. JNIL Mines site, Banjikhola (Raigarh, C.G.)
- Excise duty : As above (Pls submit CENVAT documents alongwith materials)
- Sales Tax : As above.
- Delivery : Within 4-6 weeks (as early as possible)
- Freight : Inclusive
- Payment : 10% adv. Bal. 90% against P.L. on submission of proof of dispatch.
- Tolerance : Qty. tolerance +/-5% acceptable.
- Guarantee/Warranty: Std. Clause applicable

Contd. 2

Site: Village - Banjikhola, Tehasil- Gharghoda, Dist- Raigarh (C.G.)



JAYASWAL NECO INDUSTRIES LIMITED (MINING DIVISION)

City office: Village :- Bankheta, Near at Doganoha, P.O. - Mitapara
Raigarh - 496 001 (C.G.)
Telephone. No. 09301949801, Fax : 07762 - 232958

2:

Please treat this LOI as our Purchase order for supply of above items and arrange to deliver the materials as per the schedule given in this order. Our formal purchase order confirming all terms & conditions will be sent to you shortly.

Please acknowledge receipt.

Thanking you

Yours faithfully,
For, JAYASWAL NECO INDUSTRIES LTD(CMD)

M. Mishra
AGM(Purchase & Stores)

Site: Village - Banjikhola, Tehasil- Gharghoda, Dist- Raigarh (C.G.)

कार्यालय परियोजना संचालक
परियोजना क्रियान्वयन इकाई, लोक निर्माण विभाग, निर्माण भवन,
पृथीय तल, अरेरा हिस्सा, भोपाल
आदेश क्रमांक 2440 / W/App/L/PIU/E&M/KEI/22/15-16 भोपाल दिनांक 29/7/15

विद्युत सामग्री अनुमोदन आदेश

म.प्र. शासकीय भवनों में विद्युत कार्य हेतु लोक निर्माण विभाग में प्रचलित विद्युत एस.ओ. आर. जो कि दिनांक 01-08-2014 से प्रभावी है, के आधार पर एवं विशिष्ट पुरस्का के आधार पर M/s KEI Industries Ltd. D-90, Okhla Industrial Area Phase-I New Delhi द्वारा उत्पादित विद्युत सामग्री जिन पर "KEI" व्यावसायिक चिह्न अंकित हो ऐसे HT, LT, XLPE, PVC, Submersible Cables & Wires को संलग्न उत्पाद अनुमोदन विवरण तालिका के अनुसार एतद् द्वारा विभाग में गठित समिति की अनुमति प्राप्त उपयोग हेतु अनुमोदन किया जाता है।

- अनुमोदन निम्न शर्तों के अधीन मान्य होगा :-
विद्युत सामग्री की क्वालिटी, आकार अथवा अन्य कोई शिकायत यदि होती है तो अनुमोदन निरस्त किया जा सकता है।
- यह अनुमोदन जारी होने के दिनांक से तीन वर्ष या उत्पादों की आई.एस.आई. प्रमाण-पत्रों की वैधता जो पहले हो, तक मान्य होगा। इसके नवीनीकरण के लिए वैधता के एक माह पूर्व आवेदन करना होगा।
- समय-समय पर प्राइस लिस्ट/केटलॉग/ड्राइंग आदि जब भी परिवर्तित होते हैं, इस कार्यालय को उपलब्ध कराना होगा।
- बगैर कारण दर्शाए यह अनुमोदन निरस्त करने हेतु विभाग के पास अधिकार सुरक्षित होगा।
- यह अनुमोदन भारतीय मानक ब्यूरो द्वारा जारी प्रत्येक विद्युत सामग्री का साइसेंस नवीनीकरण होने पर ही मान्य होगा। नवीनीकरण के प्रत्येक प्रमाण-पत्रों की प्रति इस कार्यालय को उपलब्ध कराई जावे। अनुमोदित प्रत्येक सामग्री पर आई.एस.आई. चिह्न अंकित होना चाहिए।

सहपत्र:- उत्पाद अनुमोदन विवरण तालिका

पू.क.क्रमांक 2441 / W/App/L/PIU/E&M/KEI/22/15-16 भोपाल दिनांक 29/7/15
प्रतिलिपि:-

- M/s KEI Industries Ltd. D-90, Okhla Industrial Area Phase-I New Delhi को उनके द्वारा प्रस्तुत पत्र के दिनांक 20-06-15 के संदर्भ में सूचनाएं।
- अतिरिक्त परियोजना संचालक, लोक निर्माण विभाग, पी.आई.एम.भोपाल, इंदौर, जबलपुर, ग्वालियर, रावा, सागर, छी और सुनार।
- अधीक्षक यंत्री, लो.नि.वि. वि/यां, मण्डल भोपाल की ओर सूचनाएं।
- संगामीय परियोजना यंत्री, लो.नि.वि. पी.आई.एम.भोपाल
- कार्यालय यंत्री, लोक निर्माण विभाग वि/यां संगामी कमांक-1.2 भोपाल/इन्दौर/उज्जैन/ग्वालियर/जबलपुर/रावा/सागर/नया वि/यां संगामी राज, परियोजना प्रशासन भोपाल की ओर सूचनाएं प्रेषित। कृपया आप अपने अधिनस्थ समस्त वि/यां उपसंगामी कार्यालयों को सूचित करें।

सहपत्र:- उत्पाद अनुमोदन विवरण तालिका।

PIU APPROVAL

संयुक्त संचालक (वि/यां)
परियोजना क्रियान्वयन इकाई,
लोक निर्माण विभाग, निर्माण भवन,
पृथीय तल, भोपाल

संयुक्त संचालक (वि/यां)
परियोजना क्रियान्वयन इकाई,
लोक निर्माण विभाग, निर्माण भवन,
पृथीय तल, भोपाल

कार्यालय परियोजना संचालक
परियोजना क्रियान्वयन इकाई, लोक निर्माण विभाग, निर्माण भवन,
पृथीय तल, अरेरा हिस्सा, भोपाल उत्पाद अनुमोदन विवरण तालिका

संलग्न आदेश क्रमांक 2440 / W/App/L/PIU/E&M/KEI/22/15-16 भोपाल दिनांक 29/7/15

स. क्र.	निर्माता का नाम तथा पता	व्यवसायिक चिह्न	अनुमोदित नमूने की संक्षिप्त विवरणियाँ	आई.एस. कोड	बी.आई.एस. द्वारा प्रचलित मानक क्रमांक	टिप्पणी
1	2	3	4	5	6	7
1	M/s KEI Industries Ltd. D-90, Okhla Industrial Area Phase-I, New Delhi	"KEI"	HT, LT, XLPE, PVC, Submersible Cables & Wires	IS:694:1990 IS:1554 P-1 : 1988	CM/L-7380172 CM/L-7379995	यह अनुमोदन जारी होने के दिनांक से तीन वर्ष तक मान्य होगा।

संयुक्त संचालक (वि/यां)
परियोजना क्रियान्वयन इकाई,
लोक निर्माण विभाग, निर्माण भवन,
पृथीय तल, भोपाल

PIU APPROVAL

R.K.M POWERGEN PVT. LTD.
Old No.45 & New No. 14, Dr. Giripada Road, T-Nagar, Chennai - 600 017
Phone : + 91 - 44 - 2815 8242 Fax: 2815 8243
E-Mail: rkmpowergen@gmail.com
Chennai TIN No : 33S81562782

PURCHASE ORDER

Supplier Details		PO No. : 14C0659	Dated: 16/12/2014
M/s.KEI Industries Ltd. 99/27, Madhav Industrial Estate, Rakkah, Silvestra-396239 Mr Kirti Kataria kirti.kataria@kei-ind.com Mob-9926123465 Tin No-2600983629		Indent No : For Lighting Purpose. Your offer reference : Email quotation	
Destination	Mode of Dispatch	Delivery Schedule	Inspection
Our Site	By Road	First Lot Before 26th Balance Within 4Week	By RKMPL
Sl. No.	Item Description	UOM	Quantity
1	5 core 2.5 sqmm 1.1KV -XLPE insulated multi strand armoured copper cable	Mtrs	25,000.00
Total Amount in Rs.			23,02,500.00
Tax & Duties:			
Discount	Length tolerance	ED	CST
Included	+ 3 %	Extra @ 10.3%	Nil Against 'C' form
P & F		Insurance	Freight
Your Scope		FOR Site	
Terms & Conditions:			
1 Invoice to be raised in Triplicate and 1 set of Invoice along with Material Test Certificate / DC to be sent to Chennai-HQ & 1 set of all documents will be sent along with material.			
2 Payment Terms: 10% Advance, Balance 10% Payment proof of Despatch documents & 10% against delivery within 10 days.			
3 L.D for delay in supply will be 1% of total order value per week subject to maximum of 10% of the total order value for the undelivered portion.			
4 Note -As per your given the GTP please despatch the materials only.			
5 General Terms & Conditions are attached as ANNEXURE - 1			
6 Material should be supplied in given dimensions, Grade and if any deviation found after supply the same shall have to be replaced by supplier on free of cost.			
7 Site Office Contact No: Mr.Sethu roman -957304564.			
8 Head Office Contact: Purchase department - 044-4629037/ Email: purchase.site@rkmpowergen.in			
Billing & Delivery Address:			
R.K.M POWERGEN PVT. LTD., Uchchinda Village, Between Dhruva & Kharsia, Tehsil - Dhruva, Jagjir Champa - Dist., Chhattisgarh - 495 692.			
YIN No. 2347179/928			

VANDANA GLOBAL LTD.

Industrial Growth Corridor, Phase-II, Siltara, Raipur-493111(C.G.)
Phone No.: 07721-264244, 407250, 407755
Fax: 07721-264243, 407253,
E-mail: vgipurchase@vandanaaglobal.com



PURCHASE ORDER

VENDOR DETAILS	INFORMATION
21816 KEI INDUSTRIES LTD D-90	PLANT : Ferro Alloys PO NO. : 4530019033 AMD NO. : 0 FILE NO. : FAP-900 P.F.NO. : 3016291 OFFER NO. : CS NO. : OLD PO REF : PRINT DATE & TIME : 18.01.2014 / 13:39:27
NEW DELHI-110020 DELHI	DT 18.01.2014 DT 18.01.2014 DT 18.01.2014
CONTACT : KATARIYA TELNOB : 01126818840 / 01126818940 FAX : 01126818840 E-MAIL : info@kei-ind.com TOP AUTHORITY/NEGOTIATOR :	DT DT DT

With reference to Verbal/Telephonic discussions our Mr. Rajesh Choudhary had with you we are pleased to place our order on you for the following as per terms & conditions mentioned below :-

SL	CODE	DESCRIPTION	QTY	UOM	RATE	MET VALUE
01		Cable AL/AR XPLE 300 SQ.MM X 3.5 C	250	M	BASIC PRICE	680.70
					Excise duty 12.360 %	21,033.63
						21,033.63
02		Cable AL/AR 18 SQ.MM X 3 C	1,730	M	BASIC PRICE	63.00
					Excise duty 12.360 %	108,960.00
						13,471.17
03		Cable AL/AR 35 SQ.MM X 3 C	630	M	BASIC PRICE	98.70
					Excise duty 12.360 %	5,673.24
						5,673.24
04		Cable Copper Ar 2.5 SQ.MM X 3 C	680	M	BASIC PRICE	67.50
					Excise duty 12.360 %	45,900.00
						45,900.00
05		Cable AL/AR 35 SQ.MM X 3.5 C	200	M	BASIC PRICE	111.00
					Excise duty 12.360 %	22,200.00
						2,743.92
06		Cable Copper Ar 5 C X 1.5	5,110	M	BASIC PRICE	70.20
					Excise duty 12.360 %	358,722.00
						358,722.00

For Vandana Global Ltd.

Prepared by: Head Office: Vandana Bhawan, M.G. Road, Raipur-492001 Phone No. 0771-2535405, 4207777 & Fax: 0771-2535804, 4285491
Authorized Signatory:

Page 1 of 2



सरकार
मुख्य इंजीनियर के कार्यालय (एस जेड) चतुर्थ
कैदीय लोक - निर्माण विभाग
जी इन्फ्रा, तीसरा तल, राजाजी भवन
बसंत नगर, चेन्नई-90.
Phone : 044-24900884 Fax: 044-24901249,
E-mail ID - cpwdele@tn.nic.in

GOVERNMENT OF INDIA
OFFICE OF THE C.E. (SZ)-IV
CENTRAL PUBLIC WORKS DEPARTMENT
G WING, III FLOOR, RAJAJI BHAVAN
BESANT NAGAR, CHENNAI-90.
Phone : 044-24900884 Fax: 044-24901249
E-mail ID - cpwdele@tn.nic.in



No. 59(3)/CE(SZ)IV/2014/3725-26

Dated 14/11/2014

OFFICE MEMORANDUM

Sub: Approval for brands for inclusion in NIT/Tenders.

Chief Engineer, SZ(IV), CPWD, Chennai has approved the following Wires & Cables manufactured by M/s KEI Industries Limited, D-90, Okhla Industrial Area, Phase-I, New Delhi-110020 for use in Electrical Divisions falling under the control of Southern Zone-IV.

S.No.	Description Of Items	Brand of the product
1)	LT/HT Cables	KEI
2)	PVC insulated wires	KEI
3)	Control Cables	KEI

- The above products are approved for a period of Two Years from the date of issue of this order which may be renewed after two years.
- SE(E)'s, EE's & AE's are required to incorporate the above brands along with the already approved other brands in the list of preferred makes in the NITs approved by them.
- The approval does not absolve CPWD Engineers concerned from their responsibility of exercising necessary checks like quality, rates & performance of the products while processing / using the same. Short comings / deficiencies of serious nature, if observed while in use at site may be brought to the notice of this office.

G. Balasubramanian
Executive Engineer (HQ)

Copy to:

- All SE(E)'s under this zone for circulation among field units.
- M/s KEI Industries Limited, D-90, Okhla Industrial Area, Phase-I, New Delhi-110020.

Executive Engineer (HQ)



DAKSHIN HARYANA SULLI VITRAN NIGAM
Chief Engineer / PD&C
Viduyt Sadan, Viduyt Nagar, DHBVN, Hisar
Ph. 016652 - 223187 FAX: 016652 - 223181
E-mail : cpdc@dhbvn@gmail.com

To
M/s KEI Industries Ltd.,
D-90, Okhla Industrial Area,
Phase-1, New Delhi-110020
Fax: 011-26817225,
26811959
Email: epco@kei-ind.com
Memo no. - Ch-153/200-51/va-50/RED
Dated- 27.02.2015

Subject:- Empanelment as approved vendor for supply of various size of cables

Please refer to your request dated 22.01.2015 for empanelment as approved vendor of various size of cables in this regard, it is intimated that your firm M/s KEI Industries Ltd., N-83, D-90, Okhla Industrial Area, Phase-1, New Delhi-110020 has been considered for enlistment as approved vendor to supply following Rating/sizes of XLPE cables:-

- 33kV, 3 Core-from 95 sq mm to 300 sq mm
- 11kV, 3 Core- from 95 sq mm to 300 sq mm
- 11kV, 3 Core- 50 sq mm
- LT cables of sizes 3.5 core 95 sq mm, 3.5 core 120 sq mm, 3.5 core 150sq mm, 3.5 core 185 sq mm, 3.5 core 240 sq mm, 3.5 core 300 sq mm, 4 Core 16 sq mm and 2 core 6 sq mm.

However, LT cables of all other sizes are also considering for enlistment subject to condition of submission of valid type test of respective size of LT cable at the time of inspection.

The cables of above mentioned Rating/sizes are enlisted in DHBVN against turnkey work of the Nigam, subject to compliance of the following conditions:-

- The material supplied should be in line with the approved GTP's / technical specification of the Nigam and any default on this account may lead to your de-empanelment.
- The supplied material if rejected twice by inspecting officer of the Nigam / third party inspecting agency on account of poor quality / sub standard material would lead to De-empanelment of the firm with immediate effect and without any notice.
- The inspecting officer should be provided with all T&P, measuring instruments/ testing equipment to undertake quality check of the material. You are further requested to ensure that T&P / testing equipment offered should be certified for its calibration.

However, your empanelment as approved vendor will be with immediate effect and remain valid up to 31.03.2016.

This is for your information please.

cc:-

- SPD to Director/Projects, DHBVN, Hisar for kind information of the Director, please
- C.E/CPDC, DHBVN, Hisar for kind information please.
- C.E./RAP-GRP, DHBVN, Hisar for kind information please
- Chief Engineer/CP, DHBVN, Hisar/Delhi
- Chief Engineer/RA, DHBVN, Hisar
- AI S.Es (CP) under DHBVN
- S.E/CPDC, DHBVN, Hisar
- AI KEN's under C.E/CPDC
- GRANT, DHBVN, Hisar

6/000 All File/2015-07 Empanelment/2233 dated Letter 000-57 from 02.02.2015.docx

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Dated 09.01.2014

TO WHOMSOEVER IT MAY CONCERN

This is to certify that M/s KEI Industries Limited is our preferred vendor for supply of HT, LT, Instrument and Control, Fire Survival Cables and Special Cables for all our projects.

We have found KEI meeting our requirement of High Quality Standards, Timely Deliveries, Competitive and Resourceful in meeting our urgent requirements.

We have extensively used KEI manufactured cables for 2 major ONGC Projects executed by us i.e. ICP-R & HRD Platforms. The main PO Nos. for these projects are as mentioned below.

0000308_3 of ICP-R
1989-hrd-Pur-HV LV Cable/020 of HRD

The collective values of the cables supplied against PO's referred and various repeat PO's are in excess of INR 250,000,000.00

The cables are in use since last 5 years on ONGC ICP-R Platform and we have found the performance satisfactory.

Authorized Signatories

Vijay Lunawat
JGM Procurement

Regd. Office: Afcons House, 16, Shah Industrial Estate, Veer Desai Road, And Nagar P.O., Post Box No. 11978, Andheri (W), Mumbai-400 053.
Tel: +91-22-6719 1000 / 2673 0042 Fax: +91-22-2673 0047 / 2673 0026 E: www.afcons.com
CIN No: U45200MH1976PLC019335



WIN POWER INFRA PVT LTD.

(Formerly Win Power Marketing Pvt. Ltd.)

Ref No: WPIPL/KEI/ADB/D.S/13-14/13
Date : 18.09.2013

To,
M/s. KEI Industries Ltd.
33, Dr. Sundari Mohan Avenue,
1st & 2nd Floor,
Kolkata-700014

Sub: Issue of Delivery Schedule.

Ref: Our Order No. 1) WPIPL/KEI/ADB/P.O/13-14/12(a) Dt. 18.09.13
2) WPIPL/KEI/ADB/P.O/13-14/13(a) Dt. 18.09.13
3) WPIPL/KEI/ADB/P.O/13-14/15 Dt. 18.09.13

Dear Sir,

With reference to above, we are enclosing herewith the delivery schedule of Materials in Annexure- I.

Therefore you are request to ensure the delivery schedule for timely completion of project.

Thanking you.

Yours faithfully,

For Win Power Infra Pvt. Ltd

Purchase Manager

GUWAHATI OFFICE: #2, Bye Lane-1, Aashram Road, South Sarania, Uluabari, Guwahati-781007, Assam.
Tel/Fax: +91 361 2467634, Email: winpower.ghy@gmail.com

CORPORATE OFFICE:
Saghi House, S.M. Road, Jorhat-785001, Assam.
Tel: +91 379 2320888, Fax: +91 379 2321807
Email: winpower.assam@gmail.com, enquiry@winpower.in
Website: www.winpower.in

REGISTERED OFFICE:
05, Harnish Palace, 20 Anant Road
Durgam, New Delhi-110002 (India)
Tel: +91 11 42078277, Fax: +91 11 42078277
Email: info@winpower.in



WIN POWER INFRA PVT.LTD

(Formerly Win Power Marketing Pvt. Ltd.)

No. WPIPL/KEI/ADB/P.O/13-14/13
Date: - 09.09.13

M/s KEI Industries Ltd.
33, Dr. Sundari Mohan Avenue,
1st & 2nd Floor,
Kolkata 700014

Kind Attention: - Mr. Jashobant SR.

Sub: - Purchase Order,
Ref: - Your Quotation No.KEI-KOL/WP/13-14/Q-0487(R1) dt. 07.09.13
Dear Sir(S),

Please arrange to supply the Materials for our ADB Packages under APDCL as per the rates, terms & conditions mentioned below:-

- Scope of work : Supply of Materials as per APDCLs T.S including any addition /deletion during approval from APDCL.

Sno	Particulars	Unit	Qty	Rate
01.	11KV XLPE Cable 3C x 185 Sq.mm	Mtr.	600	667/-

- Taxes & Duties : Only CST @1% extra as per ADB guideline.
- Price Basic : Above prices are firm till final delivery of above materials including any quantity variations if any. This also includes packing & forwarding. Actual transportation charges shall be borne by us.
- Delivery : Immediate
- Inspection : As per APDCL terms.
- Quality/Specification : As per APDCLs approved specification. A copy of APDCL, s T.S is being enclosed.
- Guarantee : 66 Months from the date of dispatch & 60 months from the date of commissioning.
- Liquidated Damage/Breakage : Time is the essence of this order and you have to strictly adhere to the delivery schedule. In case any delay from your side and materials are found broken or damaged at the time of delivery, we have the right to impose liquidated damage @ 0.5% per week of delay or part thereof, subject to a maximum of 5% of the value undelivered portion of materials.

GUWAHATI OFFICE: #2, Bye Lane-1, Aashram Road, South Sarania, Uluabari, Guwahati-781007, Assam.
Tel/Fax: +91 361 2467634, Email: winpower.ghy@gmail.com

CORPORATE OFFICE:
Saghi House, S.M. Road, Jorhat-785001, Assam.
Tel: +91 379 2320888, Fax: +91 379 2321807
Email: winpower.assam@gmail.com, enquiry@winpower.in
Website: www.winpower.in

REGISTERED OFFICE:
05, Harnish Palace, 20 Anant Road
Durgam, New Delhi-110002 (India)
Tel: +91 11 42078277, Fax: +91 11 42078277
Email: info@winpower.in



WIN POWER INFRA PVT.LTD

(Formerly Win Power Marketing Pvt. Ltd.)

No. WPIPL/KEI/HVDS/P.O/13-14/12
Date: - 09.09.13

M/s KEI Industries Ltd.
33, Dr. Sundari Mohan Avenue,
1st & 2nd Floor,
Kolkata 700014

Kind Attention: - Mr. Jashobant SR.

Sub: - Purchase Order,
Ref: - Your Quotation No.KEI-KOL/WP/13-14/Q-0487(R1) dt. 07.09.13
Dear Sir(S),

Please arrange to supply the Materials for our HVDS Packages under APDCL as per the rates, terms & conditions mentioned below:-

- Scope of work : Supply of Materials as per APDCLs T.S including any addition /deletion during approval from APDCL.

Sno	Particulars	Unit	Qty	Rate
01.	11KV XLPE Cable 1C x 630 Sq.mm	Mtr.	200	585/-
02.	11KV XLPE Cable 1C x 400 Sq.mm	Mtr.	200	371/-
03.	11KV XLPE Cable 1C x 300 Sq.mm	Mtr.	320	328/-

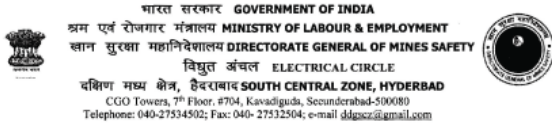
- Taxes & Duties : Only CST @1% extra as per HVDS(ADB) guideline.
- Price Basic : Above prices are firm till final delivery of above materials including any quantity variations if any. This also includes packing & forwarding. Actual transportation charges shall be borne by us.
- Delivery : Immediate
- Inspection : As per APDCL terms.
- Quality/Specification : As per APDCLs approved specification. A copy of APDCL, s T.S is being enclosed.
- Guarantee : 66 Months from the date of dispatch & 60 months from the date of commissioning.
- Liquidated Damage/Breakage : Time is the essence of this order and you have to strictly adhere to the delivery schedule. In case any delay from your side and materials are found broken or damaged at the time of delivery, we have the right to impose liquidated damage @ 0.5% per week of delay or part thereof, subject to a maximum of 5% of the value undelivered portion of materials.



GUWAHATI OFFICE: #2, Bye Lane-1, Aashram Road, South Sarania, Uluabari, Guwahati-781007, Assam.
Tel/Fax: +91 361 2467634, Email: winpower.ghy@gmail.com

CORPORATE OFFICE:
Saghi House, S.M. Road, Jorhat-785001, Assam.
Tel: +91 379 2320888, Fax: +91 379 2321807
Email: winpower.assam@gmail.com, enquiry@winpower.in
Website: www.winpower.in

REGISTERED OFFICE:
05, Harnish Palace, 20 Anant Road
Durgam, New Delhi-110002 (India)
Tel: +91 11 42078277, Fax: +91 11 42078277
Email: info@winpower.in



भारत सरकार GOVERNMENT OF INDIA
 श्रम एवं रोजगार मंत्रालय MINISTRY OF LABOUR & EMPLOYMENT
 खान सुरक्षा महानिदेशालय DIRECTORATE GENERAL OF MINES SAFETY
 विद्युत अंचल ELECTRICAL CIRCLE
 दक्षिण मध्य क्षेत्र, हैदराबाद SOUTH CENTRAL ZONE, HYDERABAD
 CGO Towers, 7th Floor, #704, Kavadiaguda, Secunderabad-500080
 Telephone: 040-27534502; Fax: 040-27532504; e-mail: dgmsecz@gmail.com

संख्या : म.म.व./विद्युत/पी.ज./2013/ 240 हैदराबाद, दिनांक 21st January, 2015
 From:
 The Director of Mines Safety (Elec.)
 South Central Zone,
 7th Floor, CGO Towers,
 Kavadiaguda, Secunderabad - 500 080.

To:
 M/s. KEI Industries Limited,
 D-90, OKLHA Industrial Area, Phase-I,
 New Delhi - 110 020.

विषय: Permission for field trial of 1.1K V, 5 Core (3 Core x 35 mm² power core + 1 Core x 16 mm² pilot core + 1C x 16 mm² bare earth core) elastomeric insulated and sheathed flexible cable, type-FT-10 manufactured by M/s. KEI Industries Limited, New Delhi conforming to IS: 14494-1998 for use in belowground coal mines in India under Regulation 181(3) of the Coal Mines Regulations, 1957.

संदर्भ: HO Letter No.2075-78/EHQ, dated 12-9-2012 & Extension of Field Trial permission vide HO letter No. 79 dated 13.01.2015.

महोदय,
 The permission under reference has been extended up to 12.09.2015 vide above cited reference. The field performance report was already submitted to Head Quarters with reference to the above permission issued originally.

The present lot of cable to be subjected under field trial shall be fully in compliance with the recommendations to facilitate the required diameter and design suiting to the plug and socket arrangements of the machine and gate-end box.

You are requested to inform this office regarding conduct of field trial of above item immediately giving the following details.

- the name of the mine where the equipment has been installed for field trial purpose;
 - its date of installation and
 - purpose for which it is being used.
- भवदीय/Yours faithfully,

 (जी. एल. कान्ता राव) / G.L. Kanta Rao
 खान सुरक्षा निदेशक (विद्युत) / Director of Mines Safety (Elect.)
 दक्षिण मध्य अंचल, हैदराबाद / South Central Zone, Hyderabad.
 /ksvs

Tele: 0181 2661597

Headquarters
 Chief Engineer Jalandhar Zone
 Military Engineer Services
 Jalandhar Cantt-144005

40016/ 606 /E4

01 Jun 2013

Headquarter
 Commander Works Engineers
 Jalandhar Cantt

Headquarter
 Commander Works Engineers
 Amritsar Cantt

Headquarter
 Commander Works Engineers
 Ferozepur Cantt

APPROVAL OF PRODUCTS

- M/s KEI Industries Limited, New Delhi has approached this HQ for introduction of their products for use in Defence Works vide their letter No KEI/MKTG/2012-13/ dated 15.05.2013.
- The name of the firm for All type of electric wire and cables i.e. multistrand single core copper wire, multi core flexible copper, submersible cables and all LT and HT cable aluminium and copper cable hereby approved in CE Jalandhar Zone for a period of two years.
- Further continuation of the products will be decided thereafter, on the basis of the mandatory feedback/performance report submitted by Zonal Chief Engineers. In case anyone using the product notices any defect/discrepancy, the same will be reported immediately without waiting for the expiry of Two years.
- The approval does not absolve the executives/supervisory staff from their responsibility for using correct quality product. It is only after they satisfied about the quality and the performance of the product will be used. Mandatory checks about the quality will be carried out as laid down and the records for the same maintained.
- Further specification/details of products can be obtained from the manufacturer at the address given below:-

M/S KEI Industries Limited
 D-90, Okhla Industrial Area,
 Phase-I,
 New Delhi -110020

(A.R. Rishi)
 AAD E/M
 For Chief Engineer

Copy to:-

M/S KEI Industries Limited
 D-90, Okhla Industrial Area,
 Phase-I,
 New Delhi -110020



संख्या 127 /वि. यु. धनबाद, दिनांक 20-01-2014 2015

प्रेषक :
 खान सुरक्षा महानिदेशक
 खान सुरक्षा महानिदेशालय
 धनबाद - 826 016.

सेवा में
 श्री आलोक साहा - जेनरल मैनेजर
 मेसर्स के.इ.आई. इंडस्ट्रियल लिमिटेड
 सी-90, ओखला इंडस्ट्रियल एरिया
 फेज-1, नई दिल्ली-110 020.

विषय : 6.35/11 KV केबल का तेल खान में प्रयोग हेतु क्षेत्रीय परीक्षण अनुमति के संबंध में - निर्माता मेसर्स के.इ.आई. इंडस्ट्रियल लिमिटेड, नई दिल्ली-110 020.

महोदय,

उपरोक्त विषय से संबंधित क्षेत्रीय परीक्षण अनुमति पत्र अंग्रेजित किया जाता है।

भवदीय,

 19.01.15
 (र.स.सिंह)
 खान सुरक्षा महानिदेशक

19/01/15



STEEL AUTHORITY OF INDIA LTD.
 ALLOY STEELS PLANT, DURGAPUR

MATERIALS MANAGEMENT DEPARTMENT

Tel : 0343-2545301 Fax : 0343-2545301

E-mail : purchaseasp@gmail.com
 Website: www.saitenders.co.in

Ref : ASP/PUR/CO-ORD/VR/2013/384/9 Date : 27/06/13

To,
 KEI Industries Ltd.,
 D-90 Okhla Industrial Area,
 Phase-I, New Delhi-110020.

Subj: Registration of Vendors

With reference to your application for registration with ASP, we are pleased to inform you that you have been included as Registered vendor with us as per certificate enclosed.

Kindly acknowledge receipt.

S. Singh
 Asstt. General Manager (MM/P-SS)
 For General Manager (MM)

Encl: 1 no. Registration Certificate

Dated 29.08.2019



TO WHOMSOEVER IT MAY CONCERN

This is to certify that M/s KEI Industries Limited have supplied 1.1 kV Aluminum XLPE Insulated Armoured Power Cables against our PO CPC/MUM/AEB/DHAR/PO-159/2017-18 DT 21.06.2017 to Dhar Cement Works. The following sizes of cables are mainly supplied:

Sr. No	Cable Size	Qty (Mtrs)
1	3.5 C x 400 sq. mm	10120
2	3.5 C x 300 sq. mm	11103
3	3 C x 300 sq. mm VFD	10145

The above cables have been laid and performance is satisfactory till date.

Thanking You

Yours faithfully
For UltraTech Cement Ltd.
(Unit : Dhar Cement Works)

Sanjay Singh
General Manager- Electrical



UltraTech Cement Ltd.
(Unit : Dhar Cement Works)

Corporate Identification Number (CIN) : L26940MH2009PLC28420
UltraTech Cement Ltd., Unit : Dhar Cement Works, Village : Torna, Taluka : Manawar - 424 446, Dist. : Dhar (M.P.) India P : +91 2294 236688 R : www.ultratechcement.com
Registered Office : UltraTech Cement Ltd., 7th Wing, 2nd Floor, Akura Centre, Mahakali Caves Road, Andheri (E), Mumbai - 400 075
T : +91 2266917800 F : +91 2266928209



Date: 20th Aug. 2018

TO WHOM SO EVER IT MAY CONCERN

We hereby certify that M/s KEI Industries Ltd. is one of our regular supplier for Cables and Wires.

We have procured substantial quantities of FRLSZH Wires, FRLSZH Power Control Cables and FRLSZH Fire Survival Cables from KEI, particularly for our Chennai Metro Rail Project-CMRL (POs value Approx. 25 Crore).

We are fully satisfied with the performance of their product. We will not hesitate to recommend their name for similar other projects.

We wish their steady and continuous success and looking forward for a long term business relationship.

For AFCONS INFRASTRUCTURE LTD



Regd. Office: Adcoas House, 16, Shah Industrial Estate, Yeola Desai Road, And Nagar P.O., Post Box No. 11978, Andheri (W), Mumbai-400 033.
Tel.: +91-22-6719 1000 / 2673 0042 Fax: +91-22-2673 0047 / 2673 0026 | www.afcons.com
CIN No.: U45200MH1970PLC039335

भारत पेट्रोलियम कॉर्पोरेशन लिमिटेड
भारत पेट्रोलियम कॉर्पोरेशन
Bharat Petroleum Corporation Ltd.
A Group of Indo Enterprises

VENDOR ENLISTMENT LETTER

VENDOR/REG/2020-21

DATE: 22.12.2020

M/s. KEI INDUSTRIES LIMITED
7 Th floor, NIRVAN Corporate, opp.
Aghadi Nagar, Jijamata Road,
Andheri (E) Mumbai-400093.

K.A. Mr. Umesh Kank / Mr. N.L.Parab
Landline no.-
Mobile no. - 9820390313 / 8879798315
E-MAIL: umesh.kank@kei-ind.com
narayan.parab@kei-ind.com

Dear Sir,

SUBJECT: ENLISTMENT AS AN APPROVED VENDOR

With reference to your request for vendor registration for the supply of HT cables, LT power, control, signal & instrumentation cables, we are pleased to inform you that your Registration as an approved Vendor has been validated as per details below:

1. Items for which enlisted : All sizes of HT cables, LT power, control, signal And instrumentation cables
2. Registration Number (SAP Vendor code) : 120521
3. Period for which registration is valid : 5 Years, upto 25.05.2025

Further it may be noted that

- The registration does not confer any particular right on you and we are not obliged to contact you for any or all of the requirements of the items for which you have been registered.
- Validity of Registration is subject to satisfactory execution of the order/s (as & when placed by us on you) in respect of delivery, quality of the ordered items and other terms and conditions.

Page 1 of 2



CITY AND INDUSTRIAL DEVELOPMENT CORPORATION OF MAHARASHTRA LIMITED
(CIN : U99999 MH 1970 SOC - 014574)

REGD. OFFICE:
"NIRMAL", 2nd Floor, Nariman Point,
Mumbai - 400 021.
PHONE : 00-91-22-6650 0900
FAX : 00-91-22-2202 2509

HEAD OFFICE:
CIDCO Bhopal, CBD Belapur,
Navi Mumbai - 400 614.
PHONE: 00-91-22-6791 8100
FAX : 00-91-22-6791 8166

Ref. No. CIDCO/EE (PA & R)/ Enlistment /Class-A/ 2022/06

Date 05.01.2022

To,
M/s. KEI Industries Ltd.,
Nirvan Corporate, 7th Floor,
Opp. Aghadi Nagar, Pump House,
Rajmata Jijabai Road, Andheri (E),
Mumbai 400 093
E: umesh.kank@kei-ind.com /
narayan.parab@kei-ind.com
W: www.kei-ind.com
T: +91 22 28239673
M: 8879798315



Subject: Enlistment for Electrical Contractor.

Reference: Your application no. KEI/MUM/CIDCO/2020-21, dated 25.01.2021 received in the office of undersigned on 25.01.2021 for enlistment as Electrical Contractor in CIDCO Ltd.

Dear Sir,
With reference to your request, vide letter under reference above, we are pleased to inform you that, your name has been included in the approved list of enlisted Electrical Contractors of CIDCO, Electrical works category as indicated below:

S. No	Name of Contractor	Category	Class	Eligibility limit up to in Rs
1	M/s. KEI INDUSTRIES LTD	Electrical Works	A	Without Limit

This Certificate is valid for THREE (03) years, i.e. from 05.01.2022 to 04.01.2025. The present enlistment policy is under revision of Corporation & on approval, the policy will be implemented within Three (03) months & revised policy will be informed to you in due course of time. Consequent upon implementation of amended policy this enlistment certificate will no more be valid and fresh enlistment certificate in lieu of this will be issued to you. The revised enlistment certificate as per amended policy will be binding on you.

Page 1 of 2

In case of any corruption related complaints, please visit :
www.cidco.maharashtra.gov.in Click on Dakshata link



CITY AND INDUSTRIAL DEVELOPMENT CORPORATION OF MAHARASHTRA LIMITED

(CIN - 099999 MH 1970 SOC - 014574)

REGD. OFFICE:

"NIRMAL", 2nd Floor, Nariman Point,
Mumbai - 400 021.
PHONE : 00-91-22-6650 0900
FAX : 00-91-22-2202 2509



HEAD OFFICE:

CIDCO Bhavan, CBD Belapur
New Mumbai - 400 614.
PHONE: 00-91-22-6791 8100
FAX : 00-91-22-6791 8166

Ref. No. CIDCO/EE (PA & R)/P-2359/2023/239

Date : 09.08.2023

To,
M/s. KEI Industries Limited.,
D-90, Olchla Industrial Area,
Phase-I, New Delhi-110020,
India.
Contact Person- Mr. Umesh Kank
Mobile, 9820390313
Email: umesh.kank@kei-ind.com

Sub: Renewal of Registration as an Approved Vendor.

Ref: i) Earlier Enlistment certificate issued vide CIDCO/EE(PA&R)/P-1758/2022/168 dated 17.03.2022 valid up to 05.07.2023.

ii) Your application regarding renewal of vendor registration dated 29.05.2023.

Dear Sir,

With reference to your request /application on subject matter, we are pleased to inform you that, your registration as an approved vendor for our projects / works for the following products is approved herewith for a period of **Two (02) years**.

Sr. No.	Product Description	Size/Range/Brand/Specification
		BRAND NAME- KEI
1	Electrical Wires	Copper/aluminium/PVC Insulated Wires Flexible conductor cables for working voltage up to including 1100V as per IS 694 2010 (FR, FRESH, ZHFR, LSZH)
2	LT Cable	Copper/aluminium/conductor/PVC & XLPE Insulated PVC Sheathed Armored & Unarmored cables working voltage up to & including 1100V as per IS 1534 Part I as per IS 7098; Part I:1988(FR, FRLS, LSZH)

Page 1 of 3

Executive Engineer (PA & REG.)
CIDCO Ltd.
Third Floor, CIDCO Bhavan,
CBD Belapur,
New Mumbai - 400 614

In case of any corruption related complaints, please visit :
www.cidco.maharashtra.gov.in Click on Dakshata link



GSL CORPORATE IDENTITY NUMBER (CIN):
UG032GA1967G01000077

Registered Office & Yard: Vasco-da-Gama, Goa - 403 802, India.
All replies to be addressed to the Chairman & Managing Director

GOA SHIPYARD LIMITED QUALITY ASSURANCE AND RELIABILITY DEPT

As ISO 9002:2015, 14001:2015, 45001:2018
CERTIFIED COMPANY

(A GOVT. OF INDIA UNDERTAKING)
MINISTRY OF DEFENCE

VASCO-DA-GAMA, GOA - 403 802, INDIA



CERTIFICATION OF RENEWAL OF REGISTRATION

With reference to your letter dated 22/09/2022 and GSL certificate of renewal of registration No. G23/AP/2019-20/R-09, dated 05/10/2019, valid up to 04/10/2022.

The registration accorded to M/s. KEI Industries Limited, Nirvan Corporate, 7th floor, Opposite Aghadi Nagar, Pump House, Rajmata Jijabai Road, Andheri (E), Mumbai 400053, Vide registration certificate mentioned above for supply of items as indicated below, is hereby renewed for a further period of 03 years.

- > Supplier Registration Code : K00148
- > Financial Limit: 150 Crore
- > Registered as Supplier for:

Sr. No.	Category of items	Item/Service Description
1	C-19	Cables
2	DPO-55	S.S. Wires

The certificate of renewal of registration is valid up to 04/10/2025. Conditions of renewal of registration will be same as per the original certificate.

Thank you

GSLQAR/PROJ/2022-23/C-192

Date: 07.12.2022

(YATIN HEGDE DESSAI)
ADDL. GENERAL MANAGER
(TS)



हिन्दुस्तान पेट्रोलियम कॉर्पोरेशन लिमिटेड

(भारत सरकार का उपक्रम) रजिस्टर्ड ऑफिस : 17, जामशेदटाटा रोड, मुंबई - 400 020.

HINDUSTAN PETROLEUM CORPORATION LIMITED

(A GOVERNMENT OF INDIA ENTERPRISE) REGISTERED OFFICE: 17, JAMSHEDTATA ROAD, MUMBAI - 400 020.

8. मुल्की वल्लभदास मार्ग, पोस्ट बॉक्स नं. 155, मुंबई - 400 001. दूरभाष - 2263 7000 • फॉक्स - 022-2261 1822, ई-मेल : mktghq@hpcl.co.in
8. Shoorji Vallabhdas Marg, P.O. Box No. 155, Mumbai - 400 001. Tel. : 2263 7000 • Fax : 022-2261 1822 • e-mail : mktghq@hpcl.co.in
CIN No. : L22001MH1952G01000888

HQ/RMR/RU
1st June 2018

To

KEI Cables
101/1032 VASTU SHIILP
VASHTU ENCLAVE
ANDHERI PUMP HOUSE
ANDHERI EAST, MUMBAI-93

Dear Sir,

Sub: Approval for KEI Make of LT/HT power cables

This has reference to your request for approval of your brand LT and HT cables in our HPCL works, we are pleased to advice you that your brand of KEI cables are now approved. The same will part of approved makes in our future tenders.

Your cables for various applications has to meet the specifications mentioned in our tender documents released from time to time.

We wish you a prosperous progress and good association with our organization in coming years.

Yours truly

R Murali Mohan Reddy
(आर मुरली मोहन रेड्डी)

आर. मुरली मोहन रेड्डी
R. MURALI MOHAN REDDY
उप महाप्रबन्धक - रिटेल उपकरण
DDM - Retail Upgradation



हिन्दुस्तान पेट्रोलियम कॉर्पोरेशन लिमिटेड

(भारत सरकार का उपक्रम) रजिस्टर्ड ऑफिस : 17, जामशेदटाटा रोड, मुंबई - 400 020.

HINDUSTAN PETROLEUM CORPORATION LIMITED

(A GOVERNMENT OF INDIA ENTERPRISE) REGISTERED OFFICE: 17, JAMSHEDTATA ROAD, MUMBAI - 400 020.

8. मुल्की वल्लभदास मार्ग, पोस्ट बॉक्स नं. 155, मुंबई - 400 001. दूरभाष - 2263 7000 • फॉक्स - 022-2261 1822, ई-मेल : mktghq@hpcl.co.in
8. Shoorji Vallabhdas Marg, P.O. Box No. 155, Mumbai - 400 001. Tel. : 2263 7000 • Fax : 022-2261 1822 • e-mail : mktghq@hpcl.co.in
CIN No. : L22001MH1952G01000888

सेवा में,

TO: मंडल प्रमुख, हिन्दुस्तान पेट्रोलियम लिमिटेड
101/1032 VASTU SHIILP
VASHTU ENCLAVE
ANDHERI PUMP HOUSE
ANDHERI EAST, MUMBAI-93
उ. 1000093

M/s. KEI Industries Ltd.
101/102/103, Vastu Ship Enclave
Andheri Pump House
Jijamata Road,
Andheri (E), Mumbai - 400 093.

दिनांक 03/03/2011

महोदय / Dear Sir,

आपकी विनियम सीमा राशि बढ़ाने के लिए ऑन लाइन आवेदन करने के संदर्भ में हमें यह सूचित करते हुए हमें यह है कि आपकी विनियम सीमा राशि को संलग्न विवरण के अनुसार बढ़ाया गया है।

In reference to your online application for enhance of financial limit, we are pleased to inform that your financial limit has been enhance as per enclosure.

सहप्रबन्धक।

Thanking you,

भवदीय,
Yours truly.

रमेश कसबे
प्रबन्धक-अप (परि एवं पा)
Ramesh Kasbe
Manager Purchase - P&P



APPROVAL LETTER

No : CE-I/EE-I/A/ 1287 /2022

Date : 29/08/2022

To,
M/S KEI INDUSTRIES LTD.,
Nirvan Coporate, 7th Floor,
Opposite Aghadi Nagar, Pump Hous,
Rajmata Jijabai Road, Andheri (E)
Mumbai- 400093 (INDIA)

Sub :- Renewal of your Products under "KEI" Brand PVC Insulated copper wire & cables and communication cables of various sizes for use in MHADA works.

Ref :- 1) Your letter no. KEI/MUM/NLP/2022-2023, Dt: 22.08.2022.
2) Previous approval Letter CE-I/EE/Elect/A/808/2020, Dt.: 04.09.2020.

Sir,

This has reference to your above said letters and subsequent correspondence on captioned subject matter. As requested, your proposal for registration of the following products manufactured by M/s KEI INDUSTRIES LTD. for use in MHADA projects is hereby approved on the following terms and conditions.

"KEI" Brand electrical accessories such as :

1. PVC Insulated cables for working Voltage upto and including 1100 V IS : 694: 2010.
2. PVC Insulated (Heavy Duty) Electric Cable Part 1 for working Voltage up to and including 1100 V IS : 1554 Part -1:1988
3. PVC Insulated (Heavy Duty) Electric Cable Part 2 for working Voltage form 3.3 KV Up to and including 11KV IS: 1554 : Part 2 : 1988
4. Cross linked polyethylene insulated PVC sheathed cables part 1 for working voltage up to 1100 V/ 3.3 KV IS 7098 : Part 1 : 2011.
5. Cross linked polyethylene insulated PVC sheathed cables part 2 for working Voltage from 3.3 KV up to and including 33KV IS 7098 : Part 2 : 2011.
6. Communication Cable as CCTV/Telephone/ Cat 6 UTP & CO-Axial Cables as per Standard Norms.

Terms and Conditions :

- 1) The validity of the enlistment shall be only for TWO years on experimental basis from

CE-I/EE-I/EE-I/A/1287.docx

गृहनिर्माण विभाग, कलानगर, बंडे (पूर्व), मुंबई ४०० ०५१.
दूरभाष ६६४० ५०००
फैक्स नं. ०२२-२६५९२०५६

Griha Nirman Bhavan, Kalanagar, Bander (East), Mumbai-400 051.
Phone : 66405000
Fax No. : 022-26592058 Website : www.mhda.maharashtra.gov.in

AN ISO 9001:2015, ISO 14001:2015 & OHSAS 18001:2007 CERTIFIED COMPANY

Micron Electricals
KEEPING YOU POWERED - SINCE 1976

Govt. Licensed Grade A (All Voltages) Electrical Contractor & Engineers
Specialists in EHV, HV, LV, ELV, HVAC & Fire Protection Services

Corporate Office: No. 86/E-1, 2nd Cross, 3rd Main Road, Industrial Suburb, 2nd Stage, Yeshwanthpur, Bangalore - 560022
Tel: 080-61908600, 22967122/23/24 • E-mail: corporate@micronelectricals.com • Website: www.micronelectricals.com

Phone: 040-68131200 (32 Lines)
E-mail: hyderabad@micronelectricals.com

FLAT No. 102, 'KRISHNA PLAZA'
KHAJURATABAD, MUNICIPAL No. 6-2-953
HYDERABAD, TELANGANA - 500 004
GSTIN: 36AABFM6757B1ZE
Licence No. A 1-992
451

6th September, 2019

TOWHOMSOEVERFITMAYCONCERN

This is to certify that M/s KEI Industries Limited is our approved vendor for supply of LT Power & Control cable.

We have always found M/s KEI Industries Limited maintaining high quality standards, timely deliveries, competitive prices and resourceful in meeting our urgent requirements.

The cables were laid and we have found the performance satisfactory till date. The cables types supplied under various PO's were LT Power & Control cable.

PONO	Project Name	Item Code	Qty
MEH-993 RI:2015 DT: 25/08/2015	DIVYA SREE NSLINFRAT PVT.LTD	3.SC400A2XFY	9675 Mtrs

for MICRON ELECTRICALS

Latha Nagesh
(AGM-PURCHASE)

KEI INDUSTRIES LIMITED

Maharashtra State Electricity Distribution Co. Ltd.

PDF Type : Vendor Registration Vendor SAP Code : null

Generated On: 15-12-2023 06:27:59

Kindly go through the details. In case of any problems/issues related to reported data, email to etender_helpdesk@mahadiscom.in

COMPANY-DETAILS

Company Name	KEI INDUSTRIES LIMITED
Company Registration Number	55-51527
Company Registration Certificate	
Company Type	Public Limited
Partnership DEED	
Partner Type	[Manufacturer]
ADDRESS	D-90, OKHLA INDUSTRIAL AREA, PHASE-1, NEW DELHI-
CITY	NEW DELHI
DISTRICT	NEW DELHI
STATE	NEW DELHI
COUNTRY	INDIA
PINCODE	110020
TELEPHONE 1	02228375642
TELEPHONE 2	
FAX 1	
FAX 2	
E-MAIL	umesh.kank@kei-ind.com
MOBILE NO.	9820390313
OFFICE TYPE	HO
OFFICE LOCATION	Corporate Office

KEI INDUSTRIES LTD.

Maharashtra State Electricity Distribution Co. Ltd.

PDF Type : Vendor Registration Vendor SAP Code : 100000732

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Kindly go through the details. In case of any problems/issues related to reported data, email to etender_helpdesk@mahadiscom.in

COMPANY-DETAILS

Company Name	KEI INDUSTRIES LTD.
Company Registration Number	55-51527
Company Registration Certificate	
Company Type	Public Limited
Partnership DEED	
Partner Type	[Manufacturer]
ADDRESS	D-90, OKHLA INDUSTRIAL AREA, PHASE-1 NEW DELHI
CITY	NEW DELHI
DISTRICT	NEW DELHI
STATE	NEW DELHI
COUNTRY	INDIA
PINCODE	110020
TELEPHONE 1	02228375642
TELEPHONE 2	
FAX 1	
FAX 2	
E-MAIL	umesh.kank@kei-ind.com
MOBILE NO.	9820390313
OFFICE TYPE	HO
OFFICE LOCATION	Corporate Office

STERLING AND WILSON PVT. LTD.

ELECTRO MECHANICAL ENGINEERS
ASSOCIATES OF :
SHAPPOORJI PALLONJHI & CO. PVT. LTD.
CIN : U31303GJ411974912017508



TO WHOMSOEVER IT MAY CONCERN

This is to certify that M/s KEI Industries Limited is our approved vendor for supply of LT Power & Control cable.

We have always found M/s KEI Industries Limited maintaining high quality standards, timely deliveries, competitive prices and resourceful in meeting our urgent requirements.

The cables were laid and we have found the performance satisfactory till date.

PO NO.	CABLE SIZE	PO DATE
4200199953	LT Cable 3.5Cx400sqmm -13.997 Kms	DI.30.06.2014
4200210568	LT Cable 3.5Cx400sqmm -13.666 Kms	DI.08.01.2015

For Sterling & Wilson

M. P. J.

Chennai Office : 'SAI SRIYAS KRISHNA', No. 72, 1st & 2nd Floor, Ekatturhanganal-Poonamallee Road, Ekatturhanganal, Chennai - 600 032.
Tel : 044 - 4295 6600 Fax : 044 - 2225 3018
Corp. Office : Universal Majeed, 5th Floor, P.L. Loharade Marg, Chembur (West), Mumbai - 400 043.
Phone : (91 - 22) 2548 5300 Fax : (91 - 22) 2548 5331
Regd. Office : B-2, Bussia Udyog Bhawan, T.J. Road, Sewri West, Mumbai - 400 015.
Branches : Bangalore, Coimbatore, Delhi / Noida, Goa, Hyderabad, Kolkata, Pune, Vadodra, Cochin, Vizag
E-mail : chennai@sterlingandwilson.com www.sterlingandwilson.com

1101, Krushal Commercial Complex,
Above Shopper's Stop,
G. M. Road, Chembur (W),
Mumbai - 400 019, India
Tel. : +91 22 6696 3333
e-mail : info@swatienergy.com
website : www.swatienergy.com
CIN : U32330MH1908PTC136767



Swati Energy & Projects (P) Ltd.

Dated 21st July 2022

TO WHOMSOEVER IT MAY CONCERN

This is to express that we have used KEI make NON EBXL Solar DC cables supplied as per TUV 2 PFG standard for our Projects

We find KEI solar NON EBXL DC cable performance to meet our expectation and working satisfactorily at installed location till date

We are fully satisfied with Quality of KEI make Solar DC cables (NON EBXL) and would not hesitate to recommend them for other projects

With Best Regards

A. Madhusudan

Madhusudan Anabattula
Business Head - Solar



TO WHOM SO EVER IT MAY CONCERN

Dated 21st July 2022

This is to express that we have used KEI make NON EBXL Solar DC cables supplied as per EN - 50618 for our Vakrangee Project located in Tehsil - Tilda, District - Raipur, Chhattisgarh

We find KEI solar NON EB XL DC cable performance to meet our expectation and working satisfactorily at installed location till date

We are fully satisfied with Quality of KEI make Solar DC cables (NON EBXL) and would not hesitate to recommend them for other projects

With Best Regards

Sahil Lalani

Deputy Manager

Waaree Renewable Technologies Ltd

Waaree Renewables Technologies Limited
(A subsidiary of Waaree Energies Limited)

504, Western Edge-1,
Western Express Highway,
Borivali (E), Mumbai - 400 066.

Tel : + 91 22 66444444
Email : waareertl@waareertl.com
Web : www.waareertl.com

CIN : L93000MH1999PLC120470
GST : 27AADGS1824J2B



Toyo Engineering India Private Limited

CIN : U28000MH1981PTC025413
Registered Office : Toyo House, L.B.S. Marg,
Kanjurmarg (West), Mumbai - 400 078, INDIA
Tel : +91 22 5072 7000, Fax : +91 22 2573 7520 / 21
E-mail : in.contact@toyo-eng.com
Website : www.toyo-eng.com/in

REF : PUR/MV/C&M/0118

DATE: 01/03/2023

M/s. KEI INDUSTRIES LIMITED

Nirvan Corporate, 7th Floor,
Opposite Aghadi Nagar, Pump House,
Rajmata Jijabai Road, Andheri (East),
Mumbai, Maharashtra - 400093
Mob: 9820390313
Fax No : +91 22 28258277

E-mail : umesh.kank@kei-ind.com

Kind Attn : Mr. Umesh Kank

Subject : **Enlistment as an approved vendor with Toyo Engineering India Pvt. Ltd. (Toyo India)**

Dear Sir,

We refer to your request on the subject matter, and are pleased to inform you that you have been enlisted with Toyo India as an approved vendor for the items mentioned below:

Item Description
INSTRUMENT SIGNAL CABLE
INSTRUMENT THERMOCOUPLE CABLE

This enlistment is valid for your works located at:

1. SP-619, 920 & 922, RICO INDUSTRIAL AREA, PHASE III, BHIWADI, DIST. ALWAR, RAJASTHAN - 301019.

Please note that this enlistment is subject to satisfactory execution of orders, maintaining schedule & quality of above mentioned items in the event of an order for our ongoing / future projects.

Further it may be noted that any change in the following shall be intimated to us along with relevant documents.

- The product range
- Location of works / sales office.
- Management / Organization structure.
- New / Revalidation of ISO 9001 / OHSAS 18001 or ISO 45001 / EMS 14001 Certification.

This enlistment is valid till **31.03.2026** subject to review on the basis of your performance. You shall send all the details three months in advance of the expiry date for Toyo India's review for renewal of enlistment.

Please note, the enlistment shall not bind Toyo India for sending enquiries / placement of orders, as also, Toyo India retains the right to review and cancel your enlistment without assigning any reasons.

Thanking you,

Yours faithfully,

For TOYO ENGINEERING INDIA PRIVATE LIMITED

HEMANT M. KUDTARKAR
Division Head - Procurement

Toyo Technology Centre, 71, Kanjar Village Road, Kanjurmarg (E), Mumbai - 400 042.

Tel : +91 22 5072 5000, Fax : +91 22 2573 5842

Delhi Office: 214, Splendor Forum, Jssola District Centre, Near Apollo Hospital, New Delhi - 110025.
Phone : 011-4059-1240, Fax : 011-4059-1246, Email : in.delhi@toyo-eng.com

भारत सरकार
श्रम एवं रोजगार मंत्रालय
खान सुरक्षा महानिदेशालय
विद्युत मुख्यालय : धनबाद

संख्या 451/153 /वि० मु०, धनबाद, दिनांक 04-02-2014

प्रेषक :
खान सुरक्षा महानिदेशक
खान सुरक्षा महानिदेशालय
धनबाद-826 016.

सेवा में
मेसर्स के०ई०आई० इंडस्ट्रिय लिमिटेड
डी-90, ओखला इंडस्ट्रियल एरिया
फेज-1, नई दिल्ली-110 020.

सीड पोस्ट

विषय : 1.1 केवी, 35 वर्ग मिमी, 3 कोर केबल का कोयला खान में प्रयोग हेतु डी०जी०एम०एस० अनुमोदन संख्या 118/2011 का नवीनीकरण के संबंध में - निर्माता मेसर्स के०ई०आई० इंडस्ट्रिय लिमिटेड, नई दिल्ली-110 020.

महोदय,

उपरोक्त विषय से संबंधित नवीनीकरण पत्र अग्रेषित किया जाता है।

भवदीय,

(राहुल गुहा)
खान सुरक्षा महानिदेशक



RESEARCH DESIGNS & STANDARDS ORGANIZATION
Manaknagar, Lucknow, Uttar Pradesh, INDIA - 226011

QA/S&T Directorate

CERTIFICATE OF APPROVAL

This is to certify that:

M/s. KEI Industries Limited

With facilities located at the following addresses:

Office Addresses	Works Addresses
D-90, Okhla Industrial Area, PH-4, New Delhi-110020	SP-919-920-922, RIICO Industrial Area, Ph-III, BHIWADI, Distt-Alwar (Rajasthan) 301109.

Is approved as a supplier for the following items:

S.No.	Item Description	Drawing / Specification	Status of Approval (Part-I / Part-II)
1.	PVC Insulated Armoured, Unscreened, Underground Railway Signaling Cable	IRS-S-63/2007 (Amd.-3)	Part-II(TWO)

Certificate Details:

Certificate No.:	RDSO/2013/QS/0129(M)	Registration / File Number	RDSO/2007/QS/CABLE/1222 VOL I
Date of Issue:	16-September-2013	Date of Expiry:	31-December-2015

(G. Govil)
Director(QA/S&T)
For Director General/QA/S&T

Note: The certificate is subject to the conditions given overleaf.



NATIONAL FEDERATION OF COOPERATIVE SUGAR FACTORIES LTD.

राष्ट्रीय सहकारी शक्कर कारखाना संघ लिमिटेड

Ansai Plaza, Block-C, 2nd Floor, August Kranti Marg, New Delhi-110049 (India)
Phone : 26263425, 26263426, 26263696, 26263891 Fax : (91-11) 26263658
Gram : FEDSUCOP E-mail : nfcsf@spectranet.com, info@coopsugar.org

Ref.No. IA-256/2013/ 458

Dated-09/07/2013

M/s KEI Industries Ltd.
D-90, Okhla Industrial Area, Phase-I,
NEW DELHI-110020

Sub. - Renewal of registration of your firm as an approved manufacturer of Electric Cables.

Dear Sir,

This is in reference to your letter dated 01st July 2013, on the above cited subject.

We are pleased to inform you that after scrutinizing the documents submitted by you. Your registration as an approved manufacturer for Electric Cables is renewed for a period of 3 (three) year from the date of issue of this letter i.e. up to 08th July 2016.

However, we retain our right to review and cancel your registration without assigning any reason whatsoever and without any liability on our part.

Thanking you,

Yours faithfully,

(VINAY KUMAR)
Managing Director



NATIONAL FEDERATION OF COOPERATIVE SUGAR FACTORIES LTD.

राष्ट्रीय सहकारी शक्कर कारखाना संघ लिमिटेड

Ansai Plaza, Block-C, 2nd Floor, August Kranti Marg, New Delhi-110049 (India)
Phone : 26263425, 26263426, 26263696, 26263891 Gram : FEDSUCOP
Fax : (91-11) 26263658 E-mail : nfcsf@airtelmail.in, nfcsf@spectranet.com



IA-256/2013 Cir-30

Dated-07/05/2013

To,

- 1) The Commissioner of Sugar (Maharashtra, Karnataka, T.N., A.P., Gujarat)
- 2) All State Federations of coop. Sugar Factories Ltd.
- 3) All Cooperative Sugar Factories (working & non working)

Sub. List of approved suppliers of complete sugar plants & critical equipments by NCDC and list of approved suppliers for important equipment by NFCSF.

Dear Sir,

Please find enclosed herewith list of approved suppliers of complete sugar plants on turn key basis along with list of equipment duly approved by NCDC vide their letter no. NCDC-11-1/98-Sugar, Dated - 13.03.2013. (Annexure I & II)

Further list of approved supplier for important equipment duly registered by NFCSF updated upto April -2013, is also enclosed at Annexure III.

Note: You are requested to send us details of serious complaints, if any, about the performance of equipments procured from the registered firms (As per Annexure I, II & III enclosed)

This is for your information, necessary action and records.

Thanking you,

Yours faithfully,
(VINAY KUMAR)
Managing Director

Encl.: as above



Plants and Machinery

LIST OF PLANT MACHINERY, CHOPANKI

SR.	NAME OF MACHINE	MAKE/COUNTRY
1	WIRE DRAWING MACHINE WITH ONLINE NIEHOFF ANNEALER (RBD) (CU)	1/ RBD CU /NIEHOFF
2	WIRE DRAWING MACHINE(RBD) (AL.)	2/ AL/ Indian
3	DUAL HEAD WIRE DRAWING MACHINE WITH ONLINE NIEHOFF ANNEALER	1/ Dual Wire/ NIEHOFF
4	HIGH SPEED BUNCHING MACHINE WITH 630MM PAYOFF SPOOL	1/ Bunche NIEHOFF,India
5	7-BOBBIN BOW TWISTER -I	1/ Indian
6	7 BOBBIN STRANDING MACHINE	1/Indian
7	37 (1+6+12+18) BOBBIN STRANDING MACHINE	2/ 19 & 37/Indian
8	61 (1+6+12+18+24) BOBBIN STRANDING MACHINE	1/ 61/ CHINA
9	65 MM COMPLETE EXTRUSION LINE	1/Indian
10	60 B SCREENING MACHINE	1/ Indian
11	60+120 MM COMPLETE DUAL EXTRUSION LINE FOR BI-COLOUR	1/ Indian
12	100 MM COMPLETE EXTRUSION LINE	1/Indian
13	LEAD EXTRUDER	1/Sweden
14	150 MM COMPLETE EXTRUSION LINE	1/Indian
15	7 BOBBIN BOW TWISTER-II	1/Indian
16	DRUM TWISTER	1/Indian
17	3+1 LAYING UP MACHINE	1/Indian
18	1+4 LAYING UP MACHINE	1/Indian
19	48 BOBBIN ARMOURING MACHINE - I	1/Indian
20	48 BOBBIN ARMOURING MACHINE-II	1/Indian
21	60 BOBBIN ARMOURING MACHINE	1/Indian
22	96 BOBBIN ARMOURING MACHINE	1/Indian
23	SPOOLING MACHINE-I	8/ Indian
24	CABLE REWINDING MACHINE - I	5/ Indian
25	BOILER	2/ Indian
26	WATER TANK FOR CURING/HV TEST	1/Indian
27	E.O.T. CRANE - I	4/Indian
28	COMPRESSOR - I	3/Indian
29	AIR DRYER UNIT	1/Indian
30	D.G. SET - I (500 KVA)	1/Indian
31	D.G. SET - II (1110 KVA)	1/USA
32	RO SYSTEM	1/Indian
33	WATER SOFTNER	1/Indian
34	COOLING TOWERS - I	2/ Indian
35	MOBILE CRANE	1/Indian
36	FORK LIFTER	1/Indian
37	UPS	1/Indian
38	CCV LINE 90MM+200MM+90MM	1/German

LIST OF PLANT MACHINERY, CHOPANKI

SR.	NAME OF MACHINE	MAKE/COUNTRY
39	32 B Laying up machine	1/Indian
40	80+175MM COMPLETE DUAL EXTRUSION LINE FOR BI-COLOUR	1/Indian
41	ALUMINIUM CORRUGATION	1/Imported
42	SHIELDING MACHINE	3
43	NITROGEN GENERATOR	1/Indian
44	WATER CHILLER	3/Indian
45	GOODS LIFT	2/ Indian
46	PASSENGER LIFT	1/Indian
47	EOT CRANE	3/5,6,7/ Indian
48	PORTABLE CRANE	1/Indian



LIST OF PLANT MACHINERY, (RUBBER PLANT) BHIWADI

SR.	NAME OF MACHINE	No. of Machine / Specification / Make
1	KNEADER - I	1 / 35 LTR / INDIA
2	INTERNAL MIXER	1 / 35 LTR / ITALMECC, ITALY
3	KNEADER - III	1 / 75 LTR / INDIA
4	TWO ROLL MILL - I	1 / 16"x42" 70 KG / INDIA
5	TWO ROLL MILL - II	1 / 16"x42" 70 KG / INDIA
6	TWO ROLL MILL - III	1 / 14"x36" 45 KG / INDIA
7	TWO ROLL MILL - VI	1 / 22"x60" 110 KG / INDIA
8	120 + 75 MM EXT. RUBBER	1 / 120 MM / IMPORTED
9	INTERLOCK ARMOURING M/C - IIInd	1 / 8 TO 80 MM / BARTELL, USA
10	120MM EXT. - IIInd (LT/R)	1 / 120 MM / INDIA
11	115 MM EXTRUDER RUBBER	1 / 115 MM / INDIA
12	TAPING & SINTERING M/C	1 / 11 MM / INDIA
13	CCV LINE (65 + 90 + 120)	1 / 120 + 90 + 65 MM / IMPORTED
14	CV LINE 90 MM - Ist	1 / 90 MM / IMPORTED
15	CV LINE 90 MM + 60 MM	1 / 60 MM / IMPORTED
16	DRUM TWISTER M/C	1 / 1600 MM + 2000 MM / INDIA
17	54 B M/C	1 / 54 B / 560 MM / INDIA
18	INTERLOCK ARMOURING M/C - Ist	1 / 8 TO 80 MM / IMPORTED
19	7 - B M/C	1 / 07 B / 560 MM / INDIA
20	BUNCHER - II	1 / 8 Bobbin / 630 MM / NIEHOFF, GERMANY
21	BUNCHER - III	1 / 8 Bobbin / 560 MM / INDIA
22	BUNCHER - IV	1 / 8 Bobbin / 630 MM / NIEHOFF, GERMANY
23	V CHAMBER - I	1 / 5KG / CM / INDIA
24	BOILER - Ist	1 / 02 TON / 17.5 KG / INDIA
25	BOILER - IIInd	1 / 02 TON / 24 KG / INDIA
26	V LAPPING M/C	1 / 630 MM / IMPORTED
27	BRAIDING M/C - 1	1 / 16 B / 2000 MM / INDIA
28	BRAIDING M/C - 2	1 / 16 B / 2000 MM / INDIA
29	BRAIDING M/C - 3	1 / 16 B / 2000 MM / INDIA
30	BRAIDING M/C - 4	1 / 16 B / 2000 MM / INDIA
31	BRAIDING M/C - 5	1 / 24 B / 2000 MM / INDIA
32	BRAIDING M/C - 6 (36 B)	1 / 36 B / 2600 MM / INDIA
33	BRAIDING M/C - 7 (36 B)	1 / 36 B / 2600 MM / INDIA
34	BRAIDING M/C - 8	1 / 16 B / 2000 MM / INDIA
35	BRAIDING M/C - 9	1 / 16 B / 2000 MM / INDIA
36	CORE REWINDING - 1	1 / 630 MM / INDIA
37	CORE REWINDING - 2	1 / 630 MM / INDIA
38	CCV LINE 90MM+200MM+90MM	CORE REWINDING - 3

LIST OF PLANT MACHINERY, (RUBBER PLANT) BHIWADI

SR.	NAME OF MACHINE	No. of Machine / Specification / Make
39	CORE REWINDING - 4	1 / 630 MM / INDIA
40	CORE REWINDING - 5	1 / 630 MM / INDIA
41	GI REWINDING - 1	1 / 560 MM / INDIA
42	GI REWINDING - 2	1 / 560 MM / INDIA
43	STRIP REWINDING - 01	1 / 300 MM / IMPORTED
44	ANNEALING FURNACE	1 / 108 KW / INDIA
45	CABLE REWINDING - 1	1 / 2600 MM / INDIA
46	CABLE REWINDING - 2	1 / 2600 MM / INDIA
47	CABLE REWINDING - 3	1 / 2600 MM / INDIA
48	45 MM EXTRUDER PTFE	1 / 45 MM / MAPRE GAUDER, BELGIUM
49	TAPING M/C	1 / 1200 MM / INDIA
50	PAIR TWISTER M/C	1 / 630 MM / INDIA
51	DETAPING M/C	1 / 2000 MM / INDIA
52	37 B M/C	1 / 37 B / 560 MM / INDIA
53	65 MM PVC EXT. (LT/R)	1 / 65 MM / INDIA
54	COILER M/C	1 / 630 MM / 1200 MM / INDIA
55	STRIPPING & CUTTING M/C - Ist	1 / 10 MTR / SEC. / IMPORTED
56	STRIPPING & CUTTING M/C - IIInd	1 / 10 MTR / SEC. / IMPORTED
57	INJECTION MOULDING M/C - 1	1 / 360 - 110 MM / IMPORTED
58	INJECTION MOULDING M/C - 2	1 / 40 - 6 MM / IMPORTED
59	INJECTION MOULDING M/C - 3	1 / 40 - D 4 66 MM / IMPORTED
60	INJECTION MOULDING M/C - 4	1 / 40 - 6 MM / IMPORTED
61	CONDITIONING CHAMBER	1 / 2600 x 4000 / INDIA
62	STRIP REWINDING - 02	1 / 300 MM / INDIA
63	CV LINE 90 MM - IIInd	1 / 90 MM / INDIA
64	CV LINE 70 MM	1 / 70 MM / INDIA
65	80 MM EXT.	1 / 80 MM / INDIA

LIST OF PLANT MACHINERY (SP-922) CONTROL DIVISION BHIWADI

SR.	NAME OF MACHINE	NO. OF MACHINES/ CAPACITY/ MAKE
29	Armouring	1/ Double head taping m/c/ India
30	Armouring	1/ 24 bobbin/400mm/ India
31	Armouring	1/ 40 bobbin/400mm/ India
32	Extruder	1/ 120mm/ India
33	Extruder	1/ 80mm/ India
34	Extruder	1/ 45mm/ India
35	Extruder	1/ 50mm/ India
36	Cable Rewinder	5/ 2200mm/ India
37	Cable Rewinder (tape)	1/ 2200mm/ India
39	GI Rewinder	13/ 400mm/ India
40	Core Rewinder	10/ 630mm/ India
41	Auto Core Rewinder	4/ 630mm/ India
42	Conductor Rewinder	4/ 630mm/ India

CONDUCTOR DIVISION

1	RBD (AL)	2/ RBD- 13 Die/ Indian
2	RBD (AL)	2/ RBD- 11 Die/ Indian
3	RBD (CU) with Annealer	1/ RBD -11 Die with Annealer CU/ Germany
4	Wire Drawing (Cu.)	1/ 16 Die/CU/ Indian
5	Wire Drawing (Cu.)	1/ 19 Die/CU/ Indian
6	Wire Drawing (AL.)	1/ 17-Die/ AL/ Indian
7	61 -Str. Machine	2/ 61-bobbin/ Indian
8	97 -Str. Machine	1/ 97-bobbin/ Indian
9	37 -Str. Machine	2/ 37-bobbin/ Indian
10	19 -Str. machine	1/ 19-bobbin/ Indian
11	Skip	1/ 7-bobbin/ Indian
12	Tubular	1/ 7-bobbin/200mm/ Indian
13	Wire Rewinder	2/ 630mm/ Indian
14	Conductor Rewinder	1/ 2200mm/ Indian
15	Tinning machine	1/ Italian

UTILITY DIVISION

1	DG set	1/ 1110 kVA/ Cummins (India)
2	DG set	1/ 1010 kVA/ Cummins (India)
3	Compressor	3/ 18.5 kW/100 CFM/ ELGI (India)
4	Goods lift	2/ 7.5 ton/ Real (India)
5	Goods lift	1/ 2.0 ton/ Globe (India)
6	Passenger Lift	1/ 680 kg/ KONE (India)

LIST OF PLANT MACHINERY (SP-919) CONTROL CABLE BHIWADI

SR.	NAME OF MACHINE	NO. OF MACHINES/ CAPACITY/ MAKE
1	CU-Std 16"-1	3/ 400mm/ India
2	65MM EXT	1/ 65mm/ India
3	65MM EXT-2	1/ 66 mm/ India
4	Pair Twister-1	2/ 400mm/ India
5	Laying 3+1	1/ 4B/530 mm/ India
6	Shielding 1+1	2/ 560 mm/ India
7	Laying - 12 B.	1/ 630 mm/ India
8	Laying - 19 B.	1/ 630 mm/ India
9	40B Arm	1/ 400 mm/ India
10	24B Arm	1/ 400 mm/ India
11	100 MM EXT	2/ 100 mm/ India
12	Cable Rewinder	10 Numbers

LIST OF PLANT MACHINERY, HT & EHV BHIWADI

1	CCV LINE	1/ 65+150+90 MM/ Germany
2	SIO PLAS LINE	1/ 60+120+80 MM/ India
3	COPPER TAPING MACHINE	10 Numbers
4	DOUBLE STEEL TAPE	—
5	DRUM TWISTER	1/ 3150 MM/ India
6	LAYING MACHINE	1/ 1600 MM / [3+1]/ India
7	EXTRUDER	1/ 120 MM/ India
8	ARMOURING MACHINE	1/ 66B / 560 MM/ India
9	ARMOURING MACHINE	1/ 54B / 560 MM/ India
10	ARMOURING MACHINE	1/ 80B / 560 MM/ India
11	ARMOURING MACHINE	1/ 80B / 560 MM/ Imported
12	EXTRUDER	1/ 120+45 MM/ India
13	EXTRUDER	1/ 150MM/ India
14	EXTRUDER	1/ 120MM/ India
15	LEAD EXTRUDER	1/ 4X11 Inch/ Imported
16	CABLE REWINDING MACHINE	05 Number
17	ELECTRIC OVER HEAD TRAVELLING (CRANE)	3/ 15 TON/ India
18	ELECTRIC OVER HEAD TRAVELLING (CRANE)	2/ 10 TON/ India
19	MATERIAL LIFTS	2/ 3 TON/ India
20	D.G. SET	1/ 1250 kVA/ India
21	D.G. SET	1/ 500 kVA/ India
22	BOILER	1/ 600KG/Hr/ India
23	NITROGEN GENERATOR	1/ 40 NM ³ /Hr/ India
24	COMPRESSOR	3/ 57 M3/Hr/ India
25	UPS	4/ 250 kVA/ India
26	PASSENGER LIFT	1/ 650 KG/ Beacon

LIST OF PLANT MACHINERY, LT CABLE BHIWADI

SR.	NAME OF MACHINE	NO. OF MACHINES/ CAPACITY/ MAKE
1	AL WIRE DRAWING MACHINE	1/ 11 DIE/ Niehoff (India)
2	7 - TUBLLER - I	1/ 07B (500MM)/ India
3	33 - B M/C	1/ 33B (500MM)/ India
4	43 - B - M/C	1/ 43B(630MM)/ India
5	65-MM EXT. - I	2/ 65MM/ India
6	100MM EXT.	1/ 100MM/ India
7	120-MM EXT. - I	2/ 120MM/ India
8	150MM EXT.	1/ 150MM/ India
9	(3+1) - LAYING - I	1/ 3+1 , 48"/ India
10	DRUM TWISTER	1/ 3+1,64"/ India
11	36-B M/C (ARM.)	1/ 32B (500MM)/ India
12	48-B (ARM.) M/C	1/ 48B (400MM)/ India
13	54-B (ARM.) M/C	1/ 54MM (500MM)/ India
14	72-B (ARM.) M/C	1/ 72B (500MM)/ India
15	FURNACE	1/ 90KW/ India
16	WATER TANK XLPE CURRING	2/ 2.5X2.6X2.1M/ India
17	BOILER - I (KUMAR)	1/ 600KG/ India
18	PROGRESSIVE LENGTH MARKING	3/ 0000TO 9999/ India
19	E.O.T	3/ 7.5TON/ India
20	E.O.T	1/ 03TON/ India
21	E.O.T - (CARRYMORE)	1/ 05TON/ India
22	LIFT	1/ 02TON/ India
23	COMPRESSOR - I st (SCREW)	1/ 105CFM/ India
24	COMPRESSOR - II nd	2/ 80CFM/ India
25	D.G. 500 kVA	1/ 500 kVA/ India
26	UPS - I st	2/ 250 kVA/ India
27	CABLE REWIENDER	7/(2200mm/2600mm/2200mm, 500mm)/ India
28	G.I. SPOOLING M/C.	8/ 500MM/ India
29	AL. STRIP M/C	1/ 500MM/ India
M/C I N MAINTENANCE		
1	LATH M/C -I st	2/ 6FEET/ India
2	SHAPPER M/C	1/ 02FEET/ India
3	DRILLING M/C (VERTICAL)	1/ 22MM / India
4	BANCH GRIENDER M/C	1/ 215MM/ India
5	WELDING M/C -I	3/ 300AMP/ India
6	POWER HACKSAW	1/ 12"/ India
7	HAND GRIENDER M/C	1/ 7"/ India

LIST OF TESTING & MEASURING INSTRUMENTS, SILVASSA

SR.	NAME OF THE INSTRUMENT	NO. OF EQUIPMENTS	MAKE/MODEL	RANGE
1	Kelvin double Bridge	1	Osaw	0-110hms
2	Million Megohmmeter	1	Sivananda/LS-3B	10-10 ⁶ MW
3	Million Megohmmeter	1	Sivananda/LS-3BD	10-10 ⁶ MW
4	H.V. Megaohm box (IR)	1	Sigma	2MW - 20GW
5	Cold chamber	1	Audiotronics	RT to - 15deg
6	Cold chamber	1	Audiotronics	RT to - 45deg
7	Spark tester	1	RE	0 - 10 kV
8	Spark tester	3	RE	0 - 15 kV
9	H.V. Tester	1	RE	0-5Kv/0-10 kV
10	H.V. DC Tester	1	RE	0 - 3 kV
11	High Voltage Test Set	1	RE (AC)	0-6Kv / 0-12 kV
12	Tensile testing m/c.	1	Presto	0 - 2500N
13	Tensile testing m/c.	1	KMI 1.5G	0 - 50KN
14	Tensile testing m/c.	1	KMI 1.3D	0 - 200N
15	Hotset test Apparatus (Temp. Controler)	1	S.A. Associates	0-5000 C
16	Digital temp. controller (Thermal stability)	1	West	0-400 OC
17	Digital temp. controller (Water bath)	1	Narang	0-400 OC
18	Digital temp. controller (Water bath-2)	1	Audiotronics	0-199.9 OC
19	Oxygen Index / Temp. Index (Temp.controller)	1	S.A. Associates	0-400 OC
20	Weighing Balace	1	Presca/303	0-300Gr.
21	Air flow meter (Flame test -IEC-332/III)	1	S.A. Associates	0-91.19psi
22	Glass flow meter (Flame test -IEC-332/III)	1	S.A. Associates	0-11.9psi
23	Pressure Gauge (Flame test -IEC-332/III)	1	Manometer	0 to 4.2 Kg/cm2
24	Pressure Gauge (Flame test -IEC-332/III)	1	Manometer	0 to 2.1 Kg/cm2
25	Vaccum Gauge (WATER ABSORBTION TEST)	1	Manometer	(-760)mm Hg
26	Digital temp. controller (Vaccume Oven))	1	PT-100	0-200OC
27	Micro-ohmmeter	2	Agronic-53c	1999MW-19.99KW
28	Glass Thermometer	1	ZEAL	-10 to 110degC
29	Glass Thermometer	1	JRM	-10 to 360degC
30	Glass Thermometer	1	JRM	-10 to 250degC
31	Glass Thermometer	1	Venus	190 to 210degC
32	Glass Thermometer	1	JRM	-10 to 110degC
33	Ageing in Air Oven	1		0 to 300degC
34	Air Oven	1	Shivki	0 to 200degC
35	Ageing Oven (Temp. Controller)	1	West	0 to 200degC
36	Hcl gas test appratus(TEMP CONTROLLER)	1	S.A. Associates	0-1000degC
37	Slip gauge	1	USSR	0.5 to 100mm
38	Vernier Caliper (DIGITAL)	1	Mitutoyo	0 - 150mm

LIST OF TESTING & MEASURING INSTRUMENTS, SILVASSA

SR.	NAME OF THE INSTRUMENT	NO. OF EQUIPMENTS	MAKE/MODEL	RANGE
38	Vernier Caliper (DIGITAL)	1	Mitutoyo	0 - 150mm
39	Digital Micrometer	1	Mitutoyo	0 - 25mm
40	Smoke Density test apparatus	1	S.A. Associates	
41	Fire Resistance Test Apparatus	1	-	-
42	Sweedish Chimmney test Apparatus	1		
43	Dumbell Cutting Die	1		-
44	Stop watch	1	Racer	0 - 15min
45	Colourfastness to Day light Exposure	1	-	-
46	Torsion testing M/C.	1	Presto	60 / 30 / 45
47	Hot Deformation test apparatus	1	S.A. Associates	-
48	Purity test	1	S.A. Associates	

LIST OF MAJOR TEST EQUIPMENT, BHIWADI

S.R.	NAME OF EQUIPMENT	NO. OF EQUIPMENTS	MODEL/TYPE/YEAR OF MAKE	RANGE
1	UNIVERSAL HEATING OVEN	1	NSW, DELHI	0- 250°C
2	UNIVERSAL HEATING OVEN	1	JOHRI SCIENTIFIC	0- 250°C
3	HEATING OVEN	2	SA ASSOCIATE	0- 250°C
4	HOT SET TEST OVEN	3	SA ASSOCIATE	0- 250°C
5	VACUUM OVEN	1	JOHRI	0 -100°C / 0 -760 mmHg
6	UNIVERSAL HEATING OVEN	2	S.A. ASSOCIATE	0 to 250°C
7	VACUUM OVEN	1	S.A. ASSOCIATE	0 to 150°C / 0 - 999 mbar
8	THERMAL STABILITY TEST APP.	3	S.A. ASSOCIATE	0-300°C
9	MILLION MEGOHM METER	2	SIVANANDA	10 M-ohms to 10 ⁶ M-ohms
10	AGEING OVEN (4 Cell)	2	S.A. ASSOCIATE	0 -250°C
11	TENSILE TESTING MACHINE	1	KMI, AHMED.	0 to 2500 N
12	AGEING OVEN (4 CELL)	2	S.A. ASSOCIATE	0 -400°C
13	AGEING OVEN (4 CELL)	2	S.A. ASSOCIATE	0 to 250°C
14	TENSILE TESTING MACHINE	1	KMI, AHMED.	0 to 2500 N
15	TENSILE TESTING MACHINE	1	KMI, AHMED.	0 - 500 N
16	TENSILE TESTING MACHINE	1	KMI, AHMED.	0 to 25000 N
17	DIGITAL WEIGHING BALANCE	1	AMAN	220 gm
18	DIGITAL WEIGHING BALANCE	1	SANSUI	6 kg
19	DIGITAL WEIGHING BALANCE	1	AFCOSET	0.00001 to 180 gms.
20	TORSION TESTING MACHINE	1	S.A. ASSOCIATE	0 To 999 turns
21	MICROMETER	1	MITUTOYO	0 to 25 mm
22	DEEP FREEZER	1	S.A. ASSOCIATE	-40 TO 30°C
23	CONDITIONING CHAMBER	1	S.A. ASSOCIATE	5 - 50°C / 0-99.9Rh %
24	WATER BATH (01)	2	JOHRI SCIENTIFIC	0 -200°C
25	WATER BATH (Big)	1	SA ASSOCIATE	0 -199.9°C
26	WATER BATH	1	S.A. ASSOCIATE	0 -100°C
27	KELVIN DOUBLE BRIDGE	1	OSAW	0.2 micro-ohm to 11 ohm
28	SENIOR KELVIN BRIDGE	1	OSAW	0.02 micro-ohm to 1.1 ohm
29	D.C.HIGH VOLTAGE TESTER	1	RE, DELHI	0-5 kV (D.C)
30	H.V. TESTER (FIRE SURVIVAL)	1	R.E.	0-1200 VOLTS
31	H.V. TESTER (A.C.) [W.I.]	1	R.E.	0-15/30 kV/22KVA
32	H.V. TESTER (A.C.) [L.T.]	1	R.E.	0-5/10 kV/50KVA
33	H.V. TESTER (A.C.) [Rubber]	1	R.E.	0-6/12 kV/ 50 kvA
34	H.V. TESTER (A.C.) [Control]	1	BILLIONIX	0-7.5/15 kV/60KVA
35	H.V. TESTER (A.C.) [H.T]	1	R.E.	0-5/10 kV/22KVA

LIST OF MAJOR TEST EQUIPMENT, BHIWADI

SR.	NAME OF EQUIPMENT	NO. OF EQUIPMENTS	MODEL/TYPE/YEAR OF MAKE	RANGE
36	DIGITAL VERNIER CALLIPER	2	MITUTOYO	0-150 mm
37	DIGITAL VERNIER CALLIPER	2	MITUTOYO	0-300 mm
38	MEG OHM BOX	1	SIGMA	20 MOHM - 200GOHM
39	DIGITAL VERNIER CALLIPER	1	MITUTOYO	0 - 150 mm
40	DIGITAL MICROMETER	1	MITUTOYO	0 - 25 mm
41	MICROMETER (Pointed)	2	MITUTOYO	0- 25 mm
42	DIGITAL MICROMETER	1	MITUTOYO	0 - 25 mm
43	MICROMETER	1	MITUTOYO	0- 25 mm
44	SMOKE DENSITY MEASUREMENT TEST APPARATUS	1	S.A. ASSOCIATES	0 - 100 %
45	THERMOMETER	2	ZEAL	10 TO 250°C
46	STANDARD CAPACITANCE BOX	1	SIGMA	0.1mPf to 3.3 uF
47	STANDARD RESISTANCE BOX	1	SIGMA	0.001 Ohm to 1Kohm
48	STANDARD RESISTANCE	1	OSAW	0.1 Ohm
49	02 & TEMP. INDEX TEST APPARATUS	1	S.A. ASSOCIATE	0 - 400°C
50	SMOKE DENSITY TEST APPARATUS	1	SA ASSOCIATE	0 TO 4.2 kg/cm ²
51	ACID GAS GENERATION TEST APP.	1	S.A. ASSOCIATE	0-1000 degC
52	FLOWMETER FOR HCL GAS GENERATION TEST APPARATUS	1	IEPL	43 to 430 sccm
53	FLAMMABILITY TEST APPARATUS	1	S.A. ASSOCIATE	---
54	FLAMMABILITY TEST APPARATUS	1	S.A. ASSOCIATE	0-1200 Deg C
55	FLAMMABILITY TEST APPARATUS (as per IEC 332-11I & IS-10810-PI-62)	1	S.A. ASSOCIATE	1.7 TO 17.05 LPM 8.98 TO 89.77 LPM
56	SWIDISH CHIMNEY TEST APP.	1	---	0 -1200°C
57	L-C-R-Q METER	1	APLAB	L - uH to H , C - pf-uf , R- ohm to M-ohm.
58	SINE SQUARE OSCILLATOR	1	TESTRONIX	1 KHz to 1000KHz / 0.3 - 30V
59	SOLID STATE AC MICROVOLTMETER	1	SYSTRONICS	AC voltage 0 microV to 500V -120db to 56db
60	DIGITAL D.C MICROVOLT AMMETER	1	TESTRONEX	0-1000V / 1000 mA
61	kV METER	1	SIGMA	0 -10 kV
62	OIL BATH	1	SCIENTIFIC TRADERS	0 - 400°C
63	AIR & OXY. BOMB TEST APP.	1	JOHRI SCIENTIFIC	R.Temp-180 Deg.C
64	OZONE RESISTANCE TEST APPARATUS	1	SA ASSOCIATE	0-180 Deg C
65	TEMPRATURE INDICATOR	1	AUDIOTRONICS	0-1200 Deg C
66	MEASURING TAPE	1	PLASTIKA	15 Meter
67	STEEL SCALE	1	KRISTEEL	0 - 150 mm
68	STEEL SCALE	1	KRISTEEL	0 - 300 mm
69	STEEL SCALE	1	OMEGA	0 - 1000 mm

LIST OF MAJOR TEST EQUIPMENT, BHIWADI

SR.	NAME OF EQUIPMENT	NO. OF EQUIPMENTS	MODEL/TYPE/YEAR OF MAKE	RANGE
70	IMPEDANCE METER	1	SIVANANDA	0 Ohm to 19.99K-ohm
71	PROFILE PROJECTOR(MICROMETER)	1	MITUTOYO	0-25MM
72	HIGH PRECISION HIGH VOLTAGE CAPACITANCE BRIDGE	1	WELLGAIN CABLE SYSTSEM LTD.	10nf to 1000pf
73	PARTIAL DISCHARGE DETECTOR	1	DIELEC-JIATE	0 pc to 250 pc with multiplier
74	H.V. TESTER	1	POWERLITE	0.1 kV TO 75 kV
75	H. V.ETESTER (Series Resonance System)	1	DIELEC-JIATE	0 - 250 kV
76	IMPULSE VOLTAGE GENERATOR	1	DIELEC-JIATE	0 - 500 kV
77	HEATING CYCLE INSTRUMENT	1	DIELEC-JIATE	0 - 110 DegC
78	DIGITAL MICRO-OHM METER	3	Agronic-53C	199.9u-ohm to 19.99K-ohm
79	BURRETE	1	BOROSIL	0.1ml to 50 ml
80	MEASURING CYLINDER	1	BOROSIL	1ml to 50 ml
81	MEASURING CYLINDER	1	BOROSIL	2ml to 250 ml
82	MEASURING CYLINDER	1	BOROSIL	5ml to 500 ml
83	MEASURING CYLINDER	1	BOROSIL	10ml to 1000 ml
84	MEASURING CYLINDER	1	BOROSIL	0.5ml to 25 ml
85	MEASURING CYLINDER	1	BOROSIL	1ml to 100 ml
86	MEASURING PIPETTE	1	BOROSIL	1 ml
87	MEASURING PIPETTE	1	BOROSIL	20 ml
88	MEASURING PIPETTE	1	BOROSIL	0.1 ml to 10 ml
89	DIGITAL STOP WATCH	2	RACER	0 - 24 Hours
90	DRY & WET THERMOMETER	1	DIMPLE	-10 TO 50°C
91	UV RADIATION TEST APPARATUS	1	SA Associate	0 - 200°C

LIST OF TESTING / QUALITY CONTROL INSTRUMENT & EQUIPMENTS, CHOPANKI

SR.	DESCRIPTION OF THE INSTRUMENT	NO. OF EQUIPMENTS	MFG/COUNTRY
1	UNIVERSAL HEATING OVEN	3	S.A. ASSOCIATE, INDIA
2	HOT SET TEST OVEN with Dail Indicator	1	S.A. ASSOCIATE, INDIA
3	VACUUM OVEN	1	S.A. ASSOCIATE, INDIA
4	THERMAL STABILITY TEST APP.	1	S.A. ASSOCIATE, INDIA
5	AGEING OVEN (4 Cell)	3	S.A. ASSOCIATE, INDIA
6	DEEP FREEZER	1	S.A. ASSOCIATE, INDIA
7	CONDITIONING CHAMBER	1	S.A. ASSOCIATE, INDIA
8	Oxygen & Temp. INDEX TEST (ASTM-D -2863)	1	S.A. ASSOCIATE, INDIA
9	SMOKE DENSITY TEST APPARATUS (ASTM-D -2843)	1	S.A. ASSOCIATE, INDIA
10	ACID GAS GENERATION TEST APP. (IEC-754-1 & 2)	1	S.A. ASSOCIATE, INDIA
11	FLAMMABILITY TEST APPARATUS (IEEE-383)	1	S.A. ASSOCIATE, INDIA
12	SWIDISH CHIMNEY TEST APP.(SS-4241475)	1	S.A. ASSOCIATE, INDIA
13	DIGITAL TEMPERATURE INDICATOR	1	
14	STEEL SCALE	1	NA
15	MILLION MEGOHM METER IN STEPS, 500V	2	SIVANANDA, INDIA
16	TENSILE TESTING MACHINE 500N, 1000N & 2500N	1	CANON TENSILE M/c, INDIA
17	TENSILE TESTING MACHINE 2kN 5kN, 10kN	1	CANON TENSILE M/c, INDIA
18	ROLLING BALL MILL	1	S.A. ASSOCIATE, INDIA
19	HYDRAULLIC PRESS	1	JOHRI SCIENTIFIC, INDIA
20	DUMB-BELL CUTTING PRESS	1	S.A. ASSOCIATE, INDIA
21	TENSILE TESTING MACHINE	1	CANON TENSILE M/c, INDIA
22	DIGITAL MICROHM METER	2	AGRONIC-53C, INDIA
23	VERNIER CALLIPER	3	MITUTOYO, JAPAN
24	L-C-R-Q METER	1	APLAB, INDIA
25	KELVIN DOUBLE BRIDGE WITH SPOT REFLECTING GALVANOMETER	1	OSAW, INDIA
26	DIGITAL WEIGHING BALANCE	1	PRECISA INDIA
27	DIGITAL WEIGHING BALANCE	1	SANSUI, INDIA
28	GLASS THERMOMETER (GT-01)	1	GERA, INDIA
29	GLASS THERMOMETER (GT-02)	1	GERA, INDIA
30	AC H.V.TESTER 12kV/50kVA	1	RE, INDIA
31	DIGITAL VERNIER CALLIPER	3	MITUTOYO, JAPAN
32	DIGITAL MICROMETER	2	MITUTOYO, JAPAN
33	DIAL VERNIER CALLIPER	1	MITUTOYO, JAPAN
34	BALL POINT MICROMETER	1	MITUTOYO, JAPAN
35	ANALOG MICROMETER	1	MITUTOYO, JAPAN
36	DIGITAL BALL TYPE MICROMETER	1	MITUTOYO, JAPAN
37	WATER BATH (Johri Scientific) WB-1	1	(JOHRI SCIENTIFIC), INDIA

LIST OF TESTING / QUALITY CONTROL INSTRUMENT & EQUIPMENTS, CHOPANKI

SR.	DESCRIPTION OF THE INSTRUMENT	NO. OF EQUIPMENTS	MFG/COUNTRY
38	WATER BATH (S.A. ASSOCIATE) WB-II	1	S.A. ASSOCIATE, INDIA
39	PROFILE PROJECTOR	1	BANBROS, INDIA
40	TORSION TESTING MACHINE	1	S.A. ASSOCIATE, INDIA
41	FLAMMABILITY TEST APPARATUS (IEC 332-I)	1	S.A. ASSOCIATE, INDIA
42	DIGITAL WEIGHING BALANCE	1	SANSUI, INDIA
43	P.D. DETECTOR (JFD-3) WITH SHIELDED ROOM	1	DIELEC - JIATE
44	SERIES RESONANCE HV TEST SET (1200kVA / 120kV)	1	DIELEC - JIATE, CHINA
45	PARTIAL DISCHARGE DETECTOR (DIELEC)	1	DIELEC - JIATE, CHINA
46	SERIES RESONANCE HV TEST SET (1200kVA / 120kV)	1	DIELEC - JIATE, CHINA
47	5 kV MEGGER and 10kV DIGITAL MEGGER	1	MEGGER, INDIA
48	PI STEEL SCALE (DIA-METRIC TAPE)	1	MICRONIX, INDIA
49	DIGITAL/ANALOUGE STOP WATCH	1	RACER
50	DIGITAL VERNIER CALLIPER	1	MITUTOYO, JAPAN
51	HVDC TESTER	1	JOHRI SCIENTIFIC, INDIA
52	WATER BATH	1	JOHRI SCIENTIFIC, INDIA
53	SERIES RESONANCE HV TEST SET (375kV/10000kVA)	1	HIPOTRONICS, USA
54	DIGITAL PARTIAL DISCHARGE DETECTOR (MTRONICX)	1	MTRONICX, HVTS, GERMANY
55	FULLY AUTOMATIC CONTROLLED TAN DELTA MEASUREMENT	1	MTRONICX, HVTS, GERMANY
56	TAN DELTA & CAPACITANCE MEASUREMENT BRIDGE QS 30A	1	WELLGAIN CABLES SYSTEMS
57	IMPULSE VOLTAGE TEST SYSTEM 2000kV/200kJ	1	WELLGAIN CABLES SYSTEMS
58	HEATING CYCLE INSTRUMENT 7000A/OPEN MOUTH TYPE	1	DIELEC - JIATE
59	HV TESTER (PROLONG HV TEST) 450 kV/225kVA	1	DIELEC - JIATE
60	HVDC & SURGE GENERATOR SET 0-32kV-400mA (4 STEPS)	1	TECHNO-INSTRUMENTS,INDIA
61	SHIELDING ROOM FOR EHV CABLES	1	DIELEC - JIATE
62	TGA (THERMOGRAVIMETRIC ANALYSER)	1	TA INSTRUMENTS, UK
63	DSC (DIFFERENTIAL SCANNING CALORIMETER)	1	TA INSTRUMENTS, UK
64	SPECTROMETER	1	PERKIN ELMERS
65	OPTICAL MICROSCOPE, MEASUREMENT SOFTWARE ASSITED (100X TO 1000X MAGNIFICATION IN FOUR STEPS)	1	DWINTER INDIA
66	ODR RHEOMETER	1	FUTURE FOUNDATIONS, INDIA
67	TAPE EXTRUSION EXTRUDER	1	SILICON, INDIA
68	GLASS THERMOMETER (GT-03) 150 deg. C	1	GERA, INDIA
69	GLASS THERMOMETER (GT-04) 250 deg. C	1	GERA, INDIA
70	TENSILE TESTING MACHINE 50KN (AUTOMATIC)	1	INSTRON, UK
71	UNIVERSAL HEATING OVEN	1	S.A. ASSOCIATE, INDIA
72	COLD ELONGATION TEST APPRATUS	1	S.A. ASSOCIATE, INDIA
73	CABLE QUICKY FOR THICKNESS MEASUREMENTS (AUTOMATIC)	1	S.A. ASSOCIATE, INDIA

LIST OF PLANT MACHINERY, LT CABLE BHIWADI

SR.	Client / Project	Order No. & Date	Description of works	Total Value
1	NTPC LTD.	PO.NO.5500016402-139-1049	GADARWARA STPP	108437397
2	BPCL(EIL)	FOA.NO.10/PJ/A307/0240/102/1518	KOCHI REFINERY	91803200
3	VIJAI ELECTRICALS LTD.	LOI.NO.VELP/MM/15-16/PVVNL/LOI/45	PVWNL, UTTAR PRADESH	181434847
4	JINDAL STEEL & POWER LTD.	PO.NO.3561001112	MARKET 3&4 FROM COKE OVEN BATTERYMARKET& MARKET 8&9 FOR BLAST FURNACE	120724778
5	ADANI POWER LTD	LOI.NO.MAIL	ADANI SOLAR KARNATAKA	229101186
6	ISWAR SINGH & ASSOCIATES CONSTRUCTION PVT LTD	PO.NO.ISACPL/KEI/17-18/332 DT-02/02/18 REVISED PO.NO. ISACPL/KEI/17-18/01 DT-20/02/18	UHBVN MGJGY	1149546816
7	FEBTECH PROJECTS & ENGINEERS LTD	LOI.NO.FPEL/KEI/2017-18/LOI-66 DT -01/08/18	SECONDARY TANK FARM (STF) WITH DEHYDRATION FACILITY AND EFFLEUNT TREATMENT PLANT AT MADHUBAN	116857817
8	DOOSAN POWER SYSTEMS INDIA PVT LTD	LOI:OBRA/2018/DPSI/LOI/SUPPLY/CABLES/039 DT-27/09/18	OBRA	205816051
9	L&T LTD, CONSTRUCTION (CIVIL BU)	LE/LE200811/POD/21/000027	BHD322130	210273736
10	L&T LTD, CONSTRUCTION (CIVIL BU)	LE/LE200811/POD/21/000027	BHD321077	106723387
11	L&T LTD, CONSTRUCTION (CIVIL BU)	LE/LE200811/POD/21/000027	BHD320757	137837933
12	DANGOTE OIL REFINING CO LTD (OLD)	Cont.No.PR 0477 [225]1426 KeiElec LV Cables Bulk	BHD303305	359643741
13	DANGOTE OIL REFINING CO LTD (OLD)	Cont.No.PR 0477 [225]1426 KeiElec LV Cables Bulk	BHD304008	355373800

LIST OF PLANT MACHINERY, LT CABLE BHIWADI

SR.	Client / Project	Order No. & Date	Description of works	Total Value
14	DANGOTE OIL REFINING CO LTD (OLD)	Cont.No.PR 0477 [225]1426 KeiElec LV Cables Bulk	BHD304813	220044540
15	DANGOTE OIL REFINING CO LTD (OLD)	Cont.No.PR 0477 [225]1426 KeiElec LV Cables Bulk	BHD305439	261738093
16	DANGOTE OIL REFINING CO LTD (OLD)	Cont.No.PR 0477 [225]1426 KeiElec LV Cables Bulk	BHD305985	214126353
17	DANGOTE OIL REFINING CO LTD (OLD)	Cont.No.PR 0477 [225]1426 KeiElec LV Cables Bulk	BHD306814	275850402
18	DANGOTE OIL REFINING CO LTD (OLD)	Cont.No.PR 0477 [225]1426 KeiElec LV Cables Bulk	BHD306265	265803910
19	DANGOTE OIL REFINING CO LTD (OLD)	Cont.No.PR 0477 [225]1426 KeiElec LV Cables Bulk	BHD306912	199052058
20	DANGOTE OIL REFINING CO LTD (OLD)	Cont.No.PR 0477 [225]1426 KeiElec LV Cables Bulk	BHD307986	265828692
21	DANGOTE OIL REFINING CO LTD (OLD)	Cont.No.PR 0477 [225]1426 KeiElec LV Cables Bulk	BHD309054	143670065
22	DANGOTE OIL REFINING CO LTD -LC	(PR_0971)_0227_0243_ 1760_{6013_6014_6015}._ KEI_E	PH0304275	116337258
23	DANGOTE OIL REFINING CO LTD -LC	(PR_0971)_0227_0243_ 1760_{6013_6014_6015} dtd.	PH0304118	104243431
24	DANGOTE OIL REFINING CO LTD -LC	(PR_0971)_0227_0243_ 1760_{6013_6014_6015} dtd.	BHD319434	140389349
25	DANGOTE OIL REFINING CO LTD -LC	(PR_1046)_0227_0243] {6013_6014}_KEI_Elec	BHD323156	154504149
26	DANGOTE OIL REFINING CO LTD -LC	(PR_1046)_0227_0243] {6013_6014}_KEI_Elec	BHD323011	129665630

LIST OF PLANT MACHINERY, LT CABLE BHIWADI

SR.	Client / Project	Order No. & Date	Description of works	Total Value
1	EIL(BPCL)	PO.NO.4504433973	INTIGRATED REFINERY PROJECT KOCHI REFINERY OF M/S BPCL-KR	157624450
2	CESC LTD.	LOI.NO.MAIL	NIL	119725711
3	JSP PROJECT PVT.LTD.	PO.NO.JSP/KEI/ RAPDRP-SCADA/ FZB/30414	EDC FIROZABAD	261879200
4	CAPITAL ELECTRICAL PVT LTD.	PO.NO.CEPL/R- APDRP/KEI/14- 15/138	R-APDRP-SCADA AT EDCJHANSI(DVNL)	187562095
5	SOUTHERN POWER DISTRIBUTION CO.	LR.NO.CGM/P&MM/ E-23/CECT-685/13/ LOI/D.NO.2091/14	TSSPDCL	254677500
6	RELIANCE INFRASTRUCTURE LIMITED	PO:NBC/M03/ 23077328 DT- 06.11.14	MUMBAI DISCOM	168141870
7	NCC LTD.	PO.NO.NCC/KSEB- RAPDRP/KOCHI/ 23745/PUR/14-15	KSEB RAPDRP(KOCHI)	138650000
8	KERALA STATE ELECRCITY BOARD.	PO.NO.CE/TRN/E2/ 3X300 XLPE CABLE/ 14-15/2251	BARAPOLE, AZHIKODE &MATTANUR SUBSTATION	101089007
9	WEST BENGAL STATE ELECTRICITY DISTRIBUTION COMPANY LIMITED	PO:MOM NO.P&C/ P-24/2014-15/PC-III /KEI/52 DT-22.01.15		133571671
10	NTPC LTD.	NOA.NO.NTPC/ ERIIHO/C&M/ DARLIPALLI/HT/ 40027888	DARLIPALLI SUPER THERMAL POWER PROJECT.	111837000
11	RELIANCE INFRASTRUCTURE LIMITED	PO:NBC/M03/23080207 DT-21.05.15	MUMBAI DISCOM (HT CABLES)2015-16	209248473
12	WBSEDCL	PO No. P&C/P-39/2014 -15/PC-III/KEI/DHQ/ 5200000202/13	SELF	200857056
13	SOUTHERN POWER DISTRIBUTION CO.	PO.NO.CGM/P&MM/E- 23/CECT-685/PM-144/ EXTN.PM-700/15	TSSPDCL	127338750

LIST OF PLANT MACHINERY, LT CABLE BHIWADI

SR.	Client / Project	Order No. & Date	Description of works	Total Value
14	RELIANCE INFRASTRUCTURE	PO.NO.NBC/M03/ 23084792	MUMBAI DISCOM	260466169
15	NECCON POWER & INFRA LTD.	PO.NO.NECCON/ ORDER/PGCIL/ASM- DMS-4/16-17/5600	MEGHALAYA	255181200
16	KERALA STATE ELECTRICITY BOARD LTD	PO.NO.SCM. 165/2016 -17/7220	SCM	108337000
17	DHANLAXMI ELECTRICALS PVT LTD	PO.NO.DEPL/IPDS/ Nagpur IP-2011-17-18/2	MSEDCL	120257800
18	TPDDL-	PO.NO.NIL	SELF	164846642
19	WBSEDCL-	PO.NO.P&C/P-52/2017- 18/PC-II/IPDS/KEI/74 DT-09/10/18		243403699
20	L&T LTD PT&D V0025376	EL351P00000018	BHD316497	108588837
21	L&T LTD PT&D V0025376	EL516P00000012	BHD316496	155326578
22	AFCONS INFRASTRUCTURE LTD- LC	4100022116DT-	SAMRUDHI MAHAMARG	177138418
23	GAIL (INDIA) LTD	GAIL/B/1968077/ 5200005671	BHD325215	285533486
24	AMRUTHA CONSTRUCTIONS PVT LTD	ACPL/BDA-NPKL PKG- 2/2022-23/0489	PH0306234	112996668
25	EFKON INDIA PVT LTD-LC	PO/2022230740	BHD327599	108014544
26	EFKON INDIA PVT LTD-LC	PO/2022230740	BHD329910	102106270
27	DHAKA ELECTRIC SUPPLY COMPANY LTD	DESCO/P.I&T/ Procurement/2019/324	CH0300576	279150480



Manufacture of Cables

MANUFACTURE OF EHV CABLES 66 kV TO 400 kV XLPE

KEI Industries Limited is equipped with the Cable Development Technologies to ensure manufacturing of cables up to and including 400 kV. At the Chopanki plant the company is into manufacturing of cables up to 400 kV and the Bhiwadi Plant is capable of manufacturing cables upto 132 kV by Dry Cure / Dry Cooled Process. The 400 kV cables are already Type & PQ tested at FGH Lab (Germany). KEI is equipped and accredited to manufacture cables to all national & international level.

Our Chopanki Plant which commenced its production in 2008 and equipped with state-of-art machines including testing equipments to meet Indian as well as international standards to produce cables and including 400kV.

KEI is equipped to manufacture EHV Cables using most modern machines & equipments at both the plants, received from M/s. Scholz and M/s. Troester (Germany). The plant is endowed with special features: Rotating Catapillers & Tross System for Eccentricity / Ovality Control at Chopanki.

- Single point Triple extrusion process prevents micro contaminants from outside atmosphere
- Dry cure & dry cooling process provides increased electrical stress bearing strength
- Online insulation thickness monitoring & control by Sikora X-ray unit
- Separate rooms with positive pressure for Insulation & semiconducting compound & vacuum feeding / Gravity Feeding at Chopanki for EHV
- Super clean / Tree retardant XLPE compound (Borealis, Dow, Hanwa etc)

We manufacture EHV Cables as per requirements of clients with Poly-Al tape, Corrugated Al / Corrugated Cu / Lead Alloy as well as with world renowned and tried process i.e. continuous extruder.

Some of the advantages of Lead extruded sheathed cables:

- Al Corrugated sheath has following advantages:
 - High Flexibility
 - Lesser Weight
 - Lesser Cost
 - Environment Friendly
- Lead has superior corrosion resistant properties in any environment than Aluminium
- Lead sheathed cables can follow bending with ease
- Lead sheathed cables provide radial water barrier
- Lead sheathed cables are easily solderable/welded
- Life of lead is more than 30 to 40 years
- Lead is very dense & easily fusible
- Shares the fault current with metallic screen in cable
- Chemical resistant behavior

A TYPICAL CROSS SECTION OF EHV CABLES:-

1. Stranded compacted plain Copper/Aluminium Conductor & Millikan Conductor for higher sizes above 1000 sq. mm. (Water tight conductors with water blocking tapes/yarn is an another option)
2. Semi Conducting Tape (Optional)
3. Extruded Semi-Conducting Layer (Conductor Screen)
4. XLPE Insulation (Super Clean Compound / Tree retardant)
5. Extruded Semi-conducting Layer (Insulation Screen)
6. Semi-conducting Water Blocking Tape
7. Extruded Lead Alloy E sheath / Aluminium Corrugated Sheath / Copper Corrugated Sheath / Aluminium Laminated Tapes
8. Semi-conducting Water Swellable Tape
9. Metallic Screen (Copper wires)
10. Counter open Helix with Copper Tape
11. Non-conducting water blocking tape
12. Extruded Inner Sheath
13. Aluminium Wire Armour
14. Outer Sheath
15. Graphite Coating / Extruded Semi-conductive layer

KEI offers complete solution for EHV Cables. Please send your requirements to us and we shall offer you our best solutions. Our Engineering department takes following into account:-

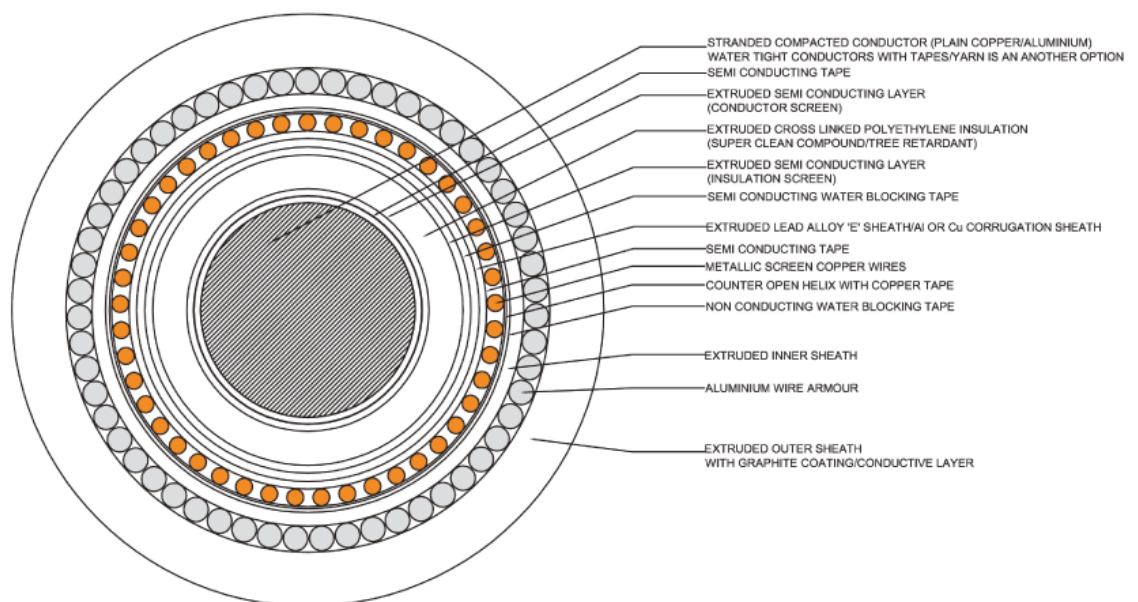
- Survey at site
- Selecting and recommending best routes for installation of the system
- Designing cables
- Manufacture of cables at their own plants (No out sourcing)
- Inspection at our plants
- Dispatch cables to site
- Take up installation of cables at site including termination and jointing etc.
- Final testing after installation & Complete Routine / Acceptance / Type testing In-house / MAH before dispatch from plant
- Charging of system
- Guarantee / warranty for the system and service after installation for many years

FOR CABLE DESIGN WE REQUIRE THE FOLLOWING:-

- i. System voltage
- ii. Operating frequency
- iii. Type of earthing
- iv. Fault current level and duration
- v. Lightning Impulse level
- vi. Normal loading
- vii. Cyclic emergency loading with duration
- viii. Max. air temperature
- ix. Ground thermal resistivity
- x. Route length requirements and allowable max. voltage drop per km
- xi. Terminations types
- xii. Site limitations & installation conditions & Drum handling System / Unloading system for longer length

Based on above and site visit, best cable solution can be designed and offered

A Typical Cross Sectional Drawing of EHV XLPE Cable



HT CABLES

KEI manufactures HT XLPE cables conforming to National and International Standards at Bhiwadi plant.

KEI has State-of-the-art HT / EHV Cable plant with German technology.

We have two CCV line with a Single point triple extrusion and computerized sophisticated control and monitoring systems. The CCV line at Bhiwadi was imported from Maschinenbau Scholz GMBH & Co KG, and CCV line at Chopanki supplied by Paul Troester Germany. Both manufacturers are renowned in CCV line technology and have supplied more than 300 lines world over.

HT plant is complete with heavy duty machines for wire drawing and conductor making, laying up, armouring, sheathing and packing.

The process commences with a compacted circular conductor Millikan Conductor being fed from the pay off stands into the extruder on elevated platform. The conductor passes through extruder's crosshead, it is covered first with semiconducting screen layer then the XLPE insulation, followed by the outer semiconducting core screen. This crosshead is specially designed to feed three compounds from three extruders at one point described as Single-point Triple extrusion.

Thereafter, the extruded core enters and passes through vulcanizing line known as CCV line (Continuous Catenary Vulcanising) and the XLPE insulated core is cured in the process. In CV line inert atmosphere is maintained by the Nitrogen gas which is at high pressure and high temperature.

This process is popularly known as Single-point Triple extrusion CDCC (Completely Dry Cured and Dry Cooled Curing) Process.

Over the cured core a copper screening is provided by lapping of copper tape or for special requirements a layer of copper wires is provided. Core is tested for Partial Discharge and then as per requirement; the cores are laid up with fillers, provided with inner sheath, armoured and sheathed. Sheath can be of PVC, HDPE, FRLS, ZHFR, PCP or CSP compound. Seamless Lead "Alloy E" Sheath is extruded for moisture barrier, necessary for EHV Cables and Submarine Cables before Inner Sheath.

KEI's manufacturing plant and process ensures great XLPE cables for the new age Power sector and industry. Our modern plant takes full advantage of the new generation XLPE compounds which offer fast curing and superior electrical parameters, dimensional control and higher productivity. The Sikora X-Ray limits at both the plants and Rotating Cattapiller & Tross System provides excellent eccentricity and ovality control for higher thickness.

Triple Extrusion and CDCC process ensure contamination free cores. All three layers are bonded and core has least eccentricity and ovality. Insulation itself is free of micro-voids and with negligible moisture content.

To control the manufacturing process the line has been provided with many sophisticated instruments and servo controls all monitored by the computer. Important systems are:

X-Ray Non-touch sensors of SIKORA make for thickness and dimensional control. This system continuously measures the dimensions of insulated cores. Unit has capability to measure multilayer dimensions in all directions and record and analyse the data on line.

CCV tube has a Touch Less Sag control system. This ensures no marks/lines on core unlike older lines.

For EHV Cables conductor pre-heater, core rotation and de-gasification facilities have been provided.

Computerised control system ensures optimum efficiency, fast start up, synchronized operations of compound feeds, three extruders, CCV line gas temperature zones, pay off and take-up.

Nevertheless, KEI XLPE cables compare better than those produced with older plants when checked for Micro-voids, Moisture content, PD levels, dielectric strength.

We have strict quality plan and fully-equipped testing laboratory to ensure cables of best quality are produced as per the design and specifications prescribed. Cables have been type tested as per International Standards.

Inventory and production plans are controlled by BANN ERP system. This ensures reliable and prompt delivery and operational efficiency.

KEI offers a variety of designs to suit different installations viz. Aerial Bunched cables, Water tight construction, Stainless steel armouring for Offshore and Ship installation, etc.

We have many satisfied customers from many countries and diverse industries.

CAPACITANCE

"Approximate Capacitance for Single core & Multi core cables in microfarad per Km at 50 Hz

NOMINAL SIZE OF CONDUCTOR (IN SQMM)	1.9 / 3.3kV (E) OR 3.3 / 3.3 kV (UE)	3.8 / 6.6kV(E)	6.35/11kV(E) OR 6.6/6.6 kV(UE)	11/11kV(UE)	12.7/22kV(E)	19/33kV(E)
	UNARMoured	ARMoured				
25	0.230	0.210	0.220	0.180	0.140	-
35	0.270	0.240	0.250	0.210	0.150	-
50	0.300	0.270	0.270	0.220	0.160	0.120
70	0.340	0.310	0.310	0.250	0.190	0.140
95	0.390	0.350	0.350	0.290	0.210	0.150
120	0.430	0.390	0.380	0.310	0.220	0.160
150	0.490	0.420	0.430	0.340	0.240	0.180
185	0.520	0.460	0.450	0.360	0.260	0.180
240	0.590	0.510	0.510	0.410	0.290	0.200
300	0.670	0.570	0.540	0.460	0.320	0.230
400	0.760	0.630	0.570	0.520	0.360	0.250
500	0.770	0.680	0.570	0.560	0.390	0.270
630	0.810	0.680	0.640	0.630	0.430	0.290
800	0.860	0.740	0.730	0.710	0.490	0.330
1000	0.880	0.740	0.800	0.780	0.530	0.360

REACTANCE

"Approximate Reactance for Multi core cables in Ohms per Km at 50 Hz

NOMINAL SIZE OF CONDUCTOR (IN SQMM)	1.9 / 3.3kV (E) OR 3.3 / 3.3 kV (UE)	3.8 / 6.6kV(E)	6.35/11kV(E) OR 6.6/6.6 kV(UE)	11/11kV(UE)	12.7/22kV(E)	19/33kV(E)
25	0.0981	0.1090	0.1160	0.1300	-	-
35	0.0940	0.1050	0.1110	0.1240	0.1270	-
50	0.0878	0.0989	0.1050	0.1170	0.1200	0.1340
70	0.0842	0.0945	0.1000	0.1110	0.1140	0.1260
95	0.0813	0.0909	0.0959	0.1070	0.1090	0.1210
120	0.0785	0.0878	0.0925	0.1030	0.1050	0.1170
150	0.0769	0.0851	0.0894	0.0987	0.1000	0.1120
185	0.0755	0.0838	0.0879	0.0968	0.0990	0.1100
240	0.0737	0.0812	0.0850	0.0932	0.0952	0.1060
300	0.0725	0.0798	0.0823	0.0897	0.0915	0.1000
400	0.0712	0.0788	0.0799	0.0866	0.0883	0.0971

CURRENT RATINGS

KEI Recommendations for Current Ratings:

The Current rating of power cables is defined by the maximum intensity of current (amperes) which can flow continuously through the cable, under permanent loading conditions, without any risk of damaging the cable or deterioration of its electrical properties.

The value given in the tables are valid for one circuit in a three phase system under conditions specified. For grouping cables rating factors must be used.

The current carrying capacities mentioned in KEI technical data are intended as a guide, to assist operating engineers in selecting cables for safety and reliability.

- Max. Conductor Temperature : 90° C
- Ambient Air Temperature : 40° C
- Ambient Ground Temperature : 30° C
- Thermal resistivity of soil : 150°C cm/W
- Depth of laying (to the highest point of the cables laid direct in the ground)
 - 3.3, 6.6 & 11 kV Cables : 90 cm
 - 22 and 33 kV Cables : 105 cm
- Max. Conductor Temperature for Short Circuit : 250° C

To obtain the maximum current carrying capacity of a cable operating at different conditions from the standard, various rating factors are to be multiplied, as follows :-

$$I_a = K \times I_s \quad \text{in amperes}$$

RATING FACTORS

1) Rating Factors for Variation in Ambient Air Temperature for Cables in Free Air

Air Temperature, 0°C	25	30	35	40	45	50	55	60
Rating Factor (Maximum Conductor Temperature 90°C)	1.14	1.1	1.05	1.0	0.95	0.89	0.84	0.77

2) Rating Factors for Variation in Ground Temperature for Direct Buried Cables

Ground Temperature, 0°C	15	20	25	30	35	40	45	50
Rating Factor (Maximum Conductor Temperature 90°C)	1.12	1.08	1.04	1.0	0.96	0.91	0.87	0.82

3) Rating Factors for Variation in Ground Temperature for Cables in Ducts

Ground Temperature, 0°C	15	20	25	30	35	40	45	50
Rating Factor (Maximum Conductor Temperature 90°C)	1.12	1.08	1.04	1.0	0.96	0.91	0.87	0.82

4) Rating Factors for Depths of Laying for Direct Buried Cables

Depth of Laying mm	3.3, 6.6 & 11 kV Cables			22 & 33 kV Cables		
	Single Core Nominal Conductor Size, mm ²		Three Core	Single Core Nominal Conductor Size, mm ²		Three Core
	≤ 185	> 185		≤ 185	> 185	
900	1.0	1.0	1.0	-	-	-
1050	0.99	0.98	0.98	1.00	1.0	1.0
1200	0.97	0.96	0.97	0.99	0.98	0.99
1500	0.95	0.94	0.95	0.97	0.96	0.97
1800	0.94	0.92	0.94	0.95	0.94	0.95
2000	0.93	0.91	0.93	0.94	0.93	0.94
2500	0.91	0.89	0.91	0.92	0.91	0.92
3000	0.89	0.87	0.90	0.90	0.89	0.91

GROUP RATING FACTORS

FOR SINGLE CORE CABLES

A) Group Rating Factors For Three Core Cables, In Horizontal Formation Laid Direct In The Ground

Number of Cables in Group	Spacing between trefoil group centres				
	Touching	200	400	600	800
2	0.73	0.83	0.88	0.90	0.92
3	0.60	0.73	0.79	0.83	0.86
4	0.54	0.68	0.75	0.80	0.84
5	0.49	0.63	0.72	0.78	0.82
6	0.46	0.67	0.70	0.76	0.81
7	0.43	0.58	0.68	0.75	0.80
8	0.41	0.57	0.67	0.74	-
9	0.39	0.55	0.66	0.73	-
10	0.37	0.54	0.65	-	-
11	0.36	0.53	0.64	-	-
12	0.35	0.52	0.64	-	-

B) Group Rating Factors to be Applied for Circuits of Three Single Core Cables in Air on Perforated Trays and Ladder Supports on Trefoil Formation (Cables laid on perforated trays)

No. Racks / Trays in Tiers	Number of Three-Phase Circuits		
	1	2	3
1	1.00	0.98	0.96
2	0.97	0.93	0.89
3	0.96	0.92	0.86

C) As above B. But Cables laid on Ladder Supports, Cleats, etc.

No. Racks / Trays in Tiers	Number of Three-Phase Circuits		
	1	2	3
1	1.00	0.98	0.96
2	0.97	0.93	0.89
3	0.96	0.92	0.86

FOR MULTI CORE CABLES

A) Group Rating Factors for Three Core Cables in Horizontal Formation Laid Direct in the Ground

No. of cables	Spacing Between Group Centre (mm)				
	Touching	200	400	600	800
2	0.80	0.86	0.90	0.92	0.94
3	0.69	0.77	0.82	0.86	0.89
4	0.62	0.72	0.79	0.83	0.87
5	0.57	0.68	0.76	0.81	0.85
6	0.54	0.65	0.74	0.80	0.84
7	0.51	0.63	0.72	0.78	0.83
8	0.49	0.61	0.71	0.78	-
9	0.47	0.60	0.70	0.77	-
10	0.46	0.59	0.69	-	-
11	0.45	0.57	0.69	-	-
12	0.43	0.56	0.68	-	-

B) Group Rating Factors for Three Core Cables in Air on Perforated Trays. For vertical spacing between trays of 300 mm and at least 20 mm between trays and wall. (Cables touching)

No. Racks / Trays	Number of cables					
	1	2	3	4	6	9
1	1.00	0.88	0.82	0.79	0.76	0.73
2	1.00	0.87	0.80	0.77	0.73	0.68
3	1.00	0.86	0.79	0.76	0.71	0.66

C) As above B. But Cables laid in spacing of 20 mm.

No. Racks / Trays	Number of cables					
	1	2	3	4	6	9
1	1.00	1.00	0.98	0.95	0.91	-
2	1.00	0.99	0.96	0.92	0.87	-
3	1.00	0.98	0.95	0.91	0.85	-

D) Group Rating Factors for Three Core Cables in Air on Vertical Perforated Trays. For horizontal spacing between trays of 25 mm with trays mounted back to back. (Cables touching)

No. Racks / Trays	Number of cables					
	1	2	3	4	6	9
1	1.00	0.88	0.82	0.78	0.73	0.72
2	1.00	0.88	0.81	0.76	0.71	0.70

E) As above D. But Cables laid in spacing of D_e where D_e = Overall diameter of cable

No. Racks / Trays	Number of cables					
	1	2	3	4	6	9
1	1.00	0.91	0.89	0.88	0.87	-
2	1.00	0.91	0.88	0.87	0.85	-

F) Group Rating Factors for Three Core Cables in Air on Ladder Supports. For vertical spacing between trays of 300 mm and at least 20 mm between trays and wall. (Cables touching)

No. Racks / Trays	Number of cables					
	1	2	3	4	6	9
1	1.00	0.87	0.82	0.80	0.79	0.78
2	1.00	0.86	0.80	0.78	0.76	0.73
3	1.00	0.85	0.79	0.76	0.73	0.70

G) As above F. But Cables laid in spacing of D_e where D_e = Overall diameter of cable

No. Racks / Trays	Number of cables					
	1	2	3	4	6	9
1	1.00	1.00	1.00	1.00	1.00	-
2	1.00	0.99	0.98	0.97	0.96	-
3	1.00	0.98	0.97	0.96	0.93	-

SINGLE CORE COMPACTED ALUMINIUM & COPPER CONDUCTOR, XLPE INSULATED, UNARMoured & ARMoured CABLE, Al & Cu/XLPE/Al WIRE/PVC CONFIRMING TO IS: 7098 (PART-2)

Voltage Grade : 1.9/3.3 kV (Screened) (E)
Voltage Grade : 3.3/3.3 kV (Unscreened) (UE)

WEIGHT & DIMENSIONS

Nominal Size of stranded, class-2 conductor as per IS: 8130	Unarmoured Cable						Armoured Cable						Current Rating																						
	Nom thickness of XLPE Insulation	Nom thickness of Outer Sheath	Approx Overall diameter of Cable with ± 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Nom thickness of XLPE Insulation	Nom diameter of Al wire	Min thickness of Outer Sheath	Approx Overall diameter of Cable with ± 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Aluminium				Copper																			
												Buried Direct in the Ground @ 30°C		In Air @ 40°C		Buried Direct in the Ground @ 30°C		In Single way Duct @ 30°C																	
												Trefoil Touching	Flat Touching	Trefoil Touching	Flat Touching	Trefoil Touching	Flat Touching	Trefoil Touching	Flat Touching																
Sq.mm.	mm	mm	Kg./Km	Kg./Km	mm	mm	mm	mm	mm	Kg./Km	Kg./Km	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Trefoil Touching	Flat Touching	In Air @ 40°C	In Single way Duct @ 30°C	Trefoil Touching	Flat Touching										
25	2.2	1.8	14.6	235	385	2.5	1.4	1.24	17.1	340	475	99	101	88	87	127	130	113	111	Amps	Amps	Amps	Amps	Amps	Amps	Trefoil Touching	Flat Touching	In Air @ 40°C	In Single way Duct @ 30°C	Trefoil Touching	Flat Touching				
35	2.2	1.8	15.6	275	470	2.5	1.4	1.24	18.1	375	575	117	120	104	103	151	155	135	132	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Trefoil Touching	Flat Touching	In Air @ 40°C	In Single way Duct @ 30°C	Trefoil Touching	Flat Touching		
50	2.2	1.8	16.7	325	605	2.5	1.4	1.4	19.5	460	725	138	141	123	120	178	181	158	154	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Trefoil Touching	Flat Touching	In Air @ 40°C	In Single way Duct @ 30°C	Trefoil Touching	Flat Touching
70	2.2	1.8	18.3	400	800	2.5	1.6	1.4	21.5	550	950	168	172	149	146	216	220	192	187	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Trefoil Touching	Flat Touching	In Air @ 40°C	In Single way Duct @ 30°C	Trefoil Touching	Flat Touching
95	2.2	2.0	20.4	515	1050	2.5	1.6	1.4	23.2	670	1200	200	204	177	172	256	260	227	220	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Trefoil Touching	Flat Touching	In Air @ 40°C	In Single way Duct @ 30°C	Trefoil Touching	Flat Touching
120	2.2	2.0	21.8	600	1275	2.5	1.6	1.4	24.6	775	1450	227	230	201	195	292	290	257	247	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Trefoil Touching	Flat Touching	In Air @ 40°C	In Single way Duct @ 30°C	Trefoil Touching	Flat Touching
150	2.2	2.0	23.2	695	1500	2.5	1.6	1.4	26.0	880	1700	252	255	223	215	329	323	285	272	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Trefoil Touching	Flat Touching	In Air @ 40°C	In Single way Duct @ 30°C	Trefoil Touching	Flat Touching
185	2.2	2.0	25.1	825	1850	2.5	1.6	1.4	27.9	1000	2050	285	287	251	241	380	362	319	302	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Trefoil Touching	Flat Touching	In Air @ 40°C	In Single way Duct @ 30°C	Trefoil Touching	Flat Touching
240	2.2	2.0	27.5	990	2350	2.5	1.6	1.56	30.6	1225	2575	326	323	286	270	448	411	361	333	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Trefoil Touching	Flat Touching	In Air @ 40°C	In Single way Duct @ 30°C	Trefoil Touching	Flat Touching
300	2.2	2.0	29.6	1175	2850	2.5	1.6	1.56	32.7	1425	3100	365	357	319	298	511	456	400	363	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Trefoil Touching	Flat Touching	In Air @ 40°C	In Single way Duct @ 30°C	Trefoil Touching	Flat Touching
400	2.2	2.2	33.0	1495	3750	2.6	2.0	1.56	36.7	1845	4050	412	397	359	329	593	508	443	393	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Trefoil Touching	Flat Touching	In Air @ 40°C	In Single way Duct @ 30°C	Trefoil Touching	Flat Touching
500	2.4	2.2	36.4	1800	4600	2.8	2.0	1.56	40.1	2200	5000	461	436	401	360	680	559	486	420	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Trefoil Touching	Flat Touching	In Air @ 40°C	In Single way Duct @ 30°C	Trefoil Touching	Flat Touching
630	2.6	2.2	40.4	2250	5750	3.0	2.0	1.72	44.4	2700	6250	514	475	445	390	777	611	543	446	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Trefoil Touching	Flat Touching	In Air @ 40°C	In Single way Duct @ 30°C	Trefoil Touching	Flat Touching
800	2.8	2.4	45.5	2800	7300	3.3	2.0	1.88	49.7	3300	7800	552	495	476	403	863	638	549	447	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Trefoil Touching	Flat Touching	In Air @ 40°C	In Single way Duct @ 30°C	Trefoil Touching	Flat Touching
1000	3.0	2.6	51.6	3500	9100	3.5	2.5	2.04	56.7	4200	9800	595	523	509	423	954	672	569	460	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Trefoil Touching	Flat Touching	In Air @ 40°C	In Single way Duct @ 30°C	Trefoil Touching	Flat Touching

SINGLE CORE COMPACTED ALUMINIUM & COPPER CONDUCTOR, XLPE INSULATED, UNARMOURED & ARMoured CABLE, Al & Cu/XLPE/Al WIRE/PVC CONFORMING TO IS: 7098 (PART-2)

Voltage Grade : 3.3/3.3 kV (Screened) (UE)
Voltage Grade : 1.9/3.3 kV (Screened) (E)

WEIGHT & DIMENSIONS

Nominal Size of stranded, class-2 conductor as per IS: 8130	Unarmoured Cable						Armoured Cable						Current Rating												
	Nom thickness of XLPE Insulation	Nom thickness of Outer Sheath	Approx Overall diameter of Cable with ± 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Nom thickness of XLPE Insulation	Nom diameter of Al wire	Min thickness of Outer Sheath	Approx Overall diameter of Cable with ± 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Aluminium				Copper									
												Buried Direct in the Ground @ 30° C		In Single way Duct @ 30° C		In Air @ 40° C		Buried Direct in the Ground @ 30° C		In Single way Duct @ 30° C		In Air @ 40° C			
												Trefoil Touching	Flat Touching	Trefoil Touching	Flat Touching	Trefoil Touching	Flat Touching	Trefoil Touching	Flat Touching	Trefoil Touching	Flat Touching	Trefoil Touching	Flat Touching	Trefoil Touching	Flat Touching
Sq.mm.	mm	mm	mm	Kg./Km	Kg./Km	mm	mm	mm	mm	Kg./Km	Kg./Km	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Trefoil Touching	Flat Touching	Trefoil Touching	Flat Touching
25	2.2	1.8	15.6	310	450	2.5	1.6	1.40	20.4	440	580	99	101	88	87	115	118	118	111	113	111	148	151		
35	2.2	1.8	16.6	350	550	2.5	1.6	1.4	21.4	500	690	117	120	104	103	139	142	151	155	135	132	179	183		
50	2.2	2	17.7	425	700	2.5	1.6	1.4	22.5	570	830	138	141	123	120	166	169	178	181	158	154	214	218		
70	2.2	2	19.3	500	900	2.5	1.6	1.4	24.1	650	1020	168	172	149	146	208	212	216	220	192	187	267	271		
95	2.2	2.0	21.4	600	1150	2.5	1.6	1.4	25.8	750	1250	200	204	177	172	252	256	256	260	227	220	323	327		
120	2.2	2.0	22.8	700	1375	2.5	1.6	1.4	27.2	870	1500	227	230	201	195	292	296	290	292	257	247	374	376		
150	2.2	2.0	24.2	800	1650	2.5	1.6	1.4	28.6	990	1770	252	255	223	215	329	333	323	323	285	272	422	422		
185	2.2	2.0	26.1	925	1975	2.5	1.6	1.56	30.8	1110	2100	285	287	251	241	380	383	362	359	319	302	484	481		
240	2.2	2.2	28.5	1125	2450	2.5	2.0	1.56	34.0	1300	2580	326	323	286	270	448	444	411	398	361	333	565	550		
300	2.2	2.2	30.6	1350	3000	2.5	2.0	1.56	36.1	1600	3170	365	357	319	298	511	502	456	435	400	363	641	615		
400	2.2	2.2	35.4	1650	3900	2.6	2.0	1.56	39.3	1900	4050	412	397	359	329	593	574	508	474	443	393	734	690		
500	2.4	2.2	38.8	2000	4800	2.8	2.0	1.72	43.0	2300	4960	461	436	401	360	680	647	559	509	486	420	828	761		
630	2.6	2.4	42.8	2450	6000	3.0	2.0	1.88	47.4	2800	6150	514	475	445	390	777	725	611	543	529	446	929	834		
800	2.8	2.6	47.9	3050	7500	3.3	2.5	2.04	53.6	3400	7650	552	495	476	403	863	780	638	549	549	447	1002	872		
1000	3.0	2.6	54	3700	9300	3.5	2.5	2.2	59.6	4160	9480	595	523	509	423	954	846	672	569	575	460	1083	927		

SINGLE CORE COMPACTED ALUMINIUM & COPPER CONDUCTOR, XLPE INSULATED, UNARMoured & ARMoured CABLE, Al & Cu/XLPE/Al WIRE/PVC CONFORMING TO IS: 7098 (PART-2)

Voltage Grade : 3.8/6.6 kV (E)

WEIGHT & DIMENSIONS

Nominal Size of stranded, class-2 conductor as per IS: 8130	Unarmoured Cable						Armoured cable						Current Rating															
	Nom thickness of XLPE Insulation	Nom thickness of Outer Sheath	Approx Overall diameter of Cable with ± 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Nom diameter of Al wire	Min thickness of Outer Sheath	Approx Overall diameter of Cable with ± 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Aluminium				Copper				Flat Touching	Flat Touching								
											Buried Direct in the Ground @ 30°C		In Single way Duct @ 30°C		In Air @ 40°C		Buried Direct in the Ground @ 30°C				In Single way Duct @ 30°C		In Air @ 40°C					
											Trefoil Touching	Flat Touching	Trefoil Touching	Flat Touching	Trefoil Touching	Flat Touching	Trefoil Touching	Flat Touching			Trefoil Touching	Flat Touching	Trefoil Touching	Flat Touching	Trefoil Touching	Flat Touching		
Sq.mm.	mm	mm	Kg./Km	Kg./Km	mm	mm	Kg./Km	Kg./Km	Kg./Km	Kg./Km	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Trefoil Touching	Flat Touching	Trefoil Touching	Flat Touching
25	2.8	1.8	18.0	340	475	1.6	1.40	20.3	450	600	99	101	88	87	115	118	127	130	133	111	148	151						
35	2.8	2.0	19.4	400	600	1.6	1.4	21.6	525	700	117	120	104	103	139	142	151	155	135	132	179	183						
50	2.8	2.0	20.5	475	750	1.6	1.4	22.7	600	875	138	141	123	120	166	169	178	181	158	154	214	218						
70	2.8	2.0	23.1	550	950	1.6	1.4	24.3	675	1050	168	172	149	146	208	212	216	220	192	187	267	271						
95	2.8	2.0	23.8	660	1200	1.6	1.4	26.0	800	1325	200	204	177	172	252	256	256	260	227	220	323	327						
120	2.8	2.0	25.2	750	1425	1.6	1.4	27.4	900	1550	227	230	201	195	292	296	290	292	257	247	374	376						
150	2.8	2.0	26.6	850	1700	1.6	1.56	29.2	1025	1850	252	255	223	215	329	333	323	323	285	272	422	422						
185	2.8	2.0	28.5	1000	2025	1.6	1.56	31.1	1150	2200	285	287	251	241	380	383	362	359	319	302	484	481						
240	2.8	2.2	31.3	1200	2550	2.0	1.56	34.3	1450	2800	326	323	286	270	448	444	411	398	361	333	565	550						
300	3.0	2.2	33.8	1425	3100	2.0	1.56	36.8	1675	3350	365	357	319	298	511	502	456	435	400	363	641	615						
400	3.3	2.2	37.4	1750	4000	2.0	1.72	41	2100	4350	412	397	359	329	593	574	508	474	443	393	734	690						
500	3.5	2.4	41.2	2150	4950	2.0	1.72	44.4	2450	5250	461	436	401	360	680	647	559	509	486	420	828	761						
630	3.5	2.4	44.8	2550	6125	2.0	1.88	48.2	2950	6450	514	475	445	390	777	725	611	543	529	446	929	834						
800	3.5	2.6	49.5	3150	7650	2.5	2.04	53.8	3700	8150	552	495	476	403	863	780	638	549	549	447	1002	872						
1000	3.6	2.8	55.4	3850	9450	2.5	2.2	59.6	4450	10050	595	523	509	423	954	846	672	549	575	440	1083	927						

SINGLE CORE COMPACTED ALUMINIUM & COPPER CONDUCTOR, XLPE INSULATED, UNARMoured & ARMoured CABLE CONFORMING TO IS: 7098 (PART-2)

Voltage Grade : 6.35 / 11kV (E), 6.6/6.6 kV (UE)

WEIGHT & DIMENSIONS

Nominal Size of stranded, class-2 conductor as per IS: 8130	Unarmoured Cable						Round Wire Armoured Cable						Current Rating																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	Nom thickness of XLPE Insulation	Nom thickness of Outer Sheath	Approx Overall diameter of Cable with $\pm$ 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Nom diameter of Al wire	Min thickness of Outer Sheath	Approx Overall diameter of Cable with $\pm$ 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Aluminium								Copper																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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SINGLE CORE COMPACTED ALUMINIUM & COPPER CONDUCTOR, XLPE INSULATED, UNARMoured & ARMoured CABLE CONFORMING TO IS: 7098 (PART-2)

Voltage Grade : 11/11 kV (UE)

WEIGHT & DIMENSIONS

Nominal Size of stranded, class-2 conductor as per IS: 8130	Unarmoured Cable						Armoured cable				Current Rating																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
	Nom thickness of XLPE Insulation	Nom thickness of Outer Sheath	Approx Overall diameter of Cable with $\pm$ 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Nom diameter of Al wire	Min thickness of Outer Sheath	Approx Overall diameter of Cable with $\pm$ 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Aluminium						Copper																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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SINGLE CORE COMPACTED ALUMINIUM & COPPER CONDUCTOR, XLPE INSULATED, UNARMoured & ARMoured CABLE CONFORMING TO IS: 7098 (PART-2)

Voltage Grade : 12.7/22 kV (E)

WEIGHT & DIMENSIONS

Nominal Size of stranded, class-2 conductor as per IS: 8130	Unarmoured Cable						Round Wire Armoured Cable						Current Rating																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
	Nom thickness of XLPE Insulation	Nom thickness of Outer Sheath	Approx Overall diameter of Cable with $\pm$ 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Norm diameter of Al wire	Min thickness of Outer Sheath	Approx Overall diameter of cable with $\pm$ 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Aluminium						Copper																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
											Buried Direct in the Ground @ 30°C			In Single way Duct @ 30°C			In Air @ 40°C			Buried Direct in the Ground @ 30°C			In Single way Duct @ 30°C			In Air @ 40°C																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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SINGLE CORE COMPACTED ALUMINIUM & COPPER CONDUCTOR, XLPE INSULATED, UNARMoured & ARMoured CABLE CONFORMING TO IS: 7098 (PART-2)

Voltage Grade : 19/33 kV (E)

WEIGHT & DIMENSIONS

Nominal Size of stranded, class-2 conductor as per IS: 8130	Unarmoured Cable						Armoured cable				Current Rating													
	Nom thickness of XLPE Insulation	Nom thickness of Outer Sheath	Approx Overall diameter of Cable with $\pm$ 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Nom diameter of Al wire	Min thickness of Outer Sheath	Approx Overall diameter of Cable with $\pm$ 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Aluminium						Copper							
											Buried Direct in the Ground @ 30°C		In Single way Duct @ 30°C		In Air @ 40°C		Buried Direct in the Ground @ 30°C		In Single way Duct @ 30°C		In Air @ 40°C			
											Trefoil Touching	Flat Touching	Trefoil Touching	Flat Touching	Trefoil Touching	Flat Touching	Trefoil Touching	Flat Touching	Trefoil Touching	Flat Touching	Trefoil Touching	Flat Touching		
Sq.mm.	mm	mm	mm	Kg./Km	Kg./Km	mm	mm	mm	Kg./Km	Kg./Km	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Amps	Trefoil Touching	Flat Touching
120	8.8	2.2	38.2	1400	2050	2.0	1.72	41.4	1700	2400	224	225	195	188	302	303	285	284	249	236	386	384		
150	8.8	2.2	39.6	1500	2350	2.0	1.72	42.8	1850	2700	249	249	217	207	339	340	317	313	276	260	434	429		
185	8.8	2.4	41.9	1700	2700	2.0	1.72	44.7	2000	3050	280	279	243	231	389	387	355	346	308	286	494	485		
240	8.8	2.4	44.3	1900	3250	2.0	1.88	47.5	2300	3650	321	316	278	261	455	449	404	387	350	320	575	556		
300	8.8	2.6	46.8	2150	3850	2.5	2.04	50.9	2750	4400	355	343	307	282	515	501	442	413	382	339	644	611		
400	8.8	2.6	49.8	2600	4850	2.5	2.04	54.1	3150	5400	400	380	345	312	594	571	490	449	422	367	734	683		
500	8.8	2.8	53.2	3000	5850	2.5	2.20	57.4	3600	6400	447	417	384	340	678	641	538	482	462	393	825	753		
630	8.8	2.8	56.8	3500	7050	2.5	2.20	61.0	4100	7650	496	453	424	367	770	715	586	513	501	416	920	823		
800	8.8	3.0	61.5	4150	8650	2.5	2.36	65.6	4800	9300	543	486	475	402	866	789	629	540	550	447	1014	890		
1000	8.8	3.2	67.2	4950	10600	3.15	2.52	72.5	5900	10500	572	508	498	417	944	851	643	552	560	453	1074	938		

Voltage Grade : 33/33 kV (UE)

WEIGHT & DIMENSIONS

Nominal Size of stranded, class-2 conductor as per IS: 8130	Unarmoured Cable						Armoured cable				Current Rating																																																																																																																																																																																																																																																																																																																																																																																																	
	Nom thickness of XLPE Insulation	Nom thickness of Outer Sheath	Approx Overall diameter of Cable with ± 3 mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Nom diameter of Al wire	Min thickness of Outer Sheath	Approx Overall diameter of cable with ± 3 mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Aluminium						Copper																																																																																																																																																																																																																																																																																																																																																																																											
											Buried Direct in the Ground @ 30°C			In Single way Duct @ 30°C			In Air @ 40°C			Buried Direct in the Ground @ 30°C			In Single way Duct @ 30°C			In Air @ 40°C																																																																																																																																																																																																																																																																																																																																																																																		
											Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	Flat Touching	Amps	Trefoil Touching	

THREE CORE, ALUMINIUM & COPPER CONDUCTOR, XLPE INSULATED, ARMoured CABLE CONFORMING TO IS: 7098 (PART-2)

Voltage Grade : 1.9/3.3 kV (Unscreened) (E)

WEIGHT & DIMENSIONS

Nominal Size of stranded, class-2 conductor as per IS: 8130	Form of conductor strand	Nom thickness of XLPE Insulation	Min thickness of PVC inner sheath	Strip Armoured Cable				Round Wire Armoured Cable				Current Rating					
				Nom Dimension of GI flat strip	Min Thickness of Outer sheath	Approx Overall diameter of Cable with ± 3 mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Nom Dimension of GI Round wire	Min Thickness of Outer sheath	Approx Overall diameter of Cable with ± 3 mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Aluminium		Copper	
Sq.mm.		mm	mm	mm x mm	mm	mm	Kg./Km	Kg./Km	mm	mm	mm	Kg./Km	Kg./Km	Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C	Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C
25	Shaped	2.2	0.3	4 x 0.8	1.40	26.9	950	1400	1.6	1.56	28.9	1200	1600	94	81	102	104
35	Shaped	2.2	0.3	4 x 0.8	1.56	28.6	1100	1700	1.6	1.56	30.2	1300	1900	112	96	123	124
50	Shaped	2.2	0.4	4 x 0.8	1.56	31.8	1300	2150	2.0	1.56	34.2	1800	2650	131	113	146	146
70	Shaped	2.2	0.4	4 x 0.8	1.56	34.0	1575	2750	2.0	1.56	36.4	2050	3250	160	138	182	178
95	Shaped	2.2	0.4	4 x 0.8	1.72	37.4	1900	3500	2.0	1.72	39.8	2400	4050	191	165	221	212
120	Shaped	2.2	0.5	4 x 0.8	1.72	39.6	2150	4200	2.0	1.88	42.4	2750	4750	216	187	254	240
150	Shaped	2.2	0.5	4 x 0.8	1.88	43.0	2500	5050	2.5	2.04	46.6	3500	6050	241	208	286	268
185	Shaped	2.2	0.5	4 x 0.8	2.04	46.2	2950	6050	2.5	2.04	49.6	4000	7100	273	236	330	302
240	Shaped	2.2	0.6	4 x 0.8	2.20	49.9	3500	7550	2.5	2.20	53.3	4600	8650	315	277	385	353
300	Shaped	2.2	0.6	4 x 0.8	2.20	55.9	4200	9300	2.5	2.36	59.7	5500	10500	354	312	440	395
400	Shaped	2.2	0.7	4 x 0.8	2.52	60.9	5250	12000	3.15	2.68	65.7	7200	13950	403	355	512	445

THREE CORE, ALUMINIUM & COPPER CONDUCTOR, XLPE INSULATED, ARMoured CABLE CONFORMING TO IS: 7098 (PART-2)

Voltage Grade : 3.3/3.3 kV (Screened) (UE)

WEIGHT & DIMENSIONS

Nominal Size of stranded, class-2 conductor as per IS: 8130	Form of conductor strand	Nom thickness of XLPE Insulation	Min thickness of PVC Inner sheath	Strip Armoured Cable				Round Wire Armoured Cable				Current Rating							
				Nom Dimension of GI flat strip	Min Thickness of Outer sheath	Approx Overall diameter of Cable with ± 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Nom Dimension of GI Round wire	Min Thickness of Outer sheath	Approx Overall diameter with ± 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Aluminium		Copper			
														Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C	In Air @ 40°C	Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C	In Air @ 40°C
Sq.mm.	0	mm	mm	mm x mm	mm	mm	Kg./Km	Kg./Km	mm	mm	Kg./Km	Kg./Km	Amps	Amps	Amps	Amps	Amps	Amps	
25	Circular	2.2	0.4	4 x 0.8	1.56	33.9	1500	1950	2.0	1.56	36.3	2000	2450	94	81	102	121	104	132
35	Circular	2.2	0.4	4 x 0.8	1.56	36.0	1700	2300	2.0	1.72	38.4	2300	2900	112	96	123	144	124	159
50	Circular	2.2	0.4	4 x 0.8	1.72	38.7	1975	2800	2.0	1.72	41.4	2550	3400	131	113	146	169	146	188
70	Circular	2.2	0.5	4 x 0.8	1.72	42.0	2350	3500	2.0	1.88	44.6	3000	4200	160	138	182	206	178	234
95	Circular	2.2	0.5	4 x 0.8	1.88	45.8	2800	4400	2.5	2.04	49.6	3900	5500	191	165	221	246	212	284
120	Circular	2.2	0.5	4 x 0.8	2.04	49.1	3350	5350	2.5	2.04	52.5	4550	6575	216	187	254	278	240	326
150	Circular	2.2	0.6	4 x 0.8	2.04	52.5	3600	6150	2.5	2.20	56.1	4900	7400	241	208	286	310	268	368
185	Circular	2.2	0.6	4 x 0.8	2.20	56.7	4200	7350	2.5	2.36	60.5	5600	8700	273	236	330	350	302	422
240	Circular	2.2	0.6	4 x 0.8	2.36	62.1	5100	9150	2.5	2.36	65.5	6550	10600	315	277	385	401	353	492
300	Circular	2.2	0.7	4 x 0.8	2.52	66.7	5900	11000	3.15	2.68	71.8	8200	13300	354	312	440	449	395	559
400	Circular	2.2	0.7	4 x 0.8	2.68	73.8	7400	14200	3.15	2.84	78.9	10000	16800	403	355	512	506	445	642

Voltage Grade : 3.8/6.6 kV (E)

WEIGHT & DIMENSIONS

Nominal Size of classed, standard, conductor as per IS: 8130	Form of conductor strand	Nom thickness of XLPE Insulation	Min thickness of PVC Inner sheath	Strip Armoured Cable				Round Wire Armoured Cable				Current Rating							
				Nom Dimension of GI flat strip	Min Thickness of Outer sheath	Approx Overall diameter of Cable with ± 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Nom Dimension of GI Round wire	Min Thickness of Outer sheath	Approx Overall diameter of Cable with ± 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Aluminium		Copper			
Sq.mm.	0	mm	mm	mm x mm	mm	mm	Kg./Km	Kg./Km	mm	mm	mm	Kg./Km	Kg./Km	Amps	Amps	Amps	Amps	In Single way buried Duct @ 30°C	In Air @ 40°C
25	Circular	2.8	0.4	4 x 0.8	1.56	36.8	1700	2150	2.0	1.72	39.4	2300	2700	94	81	102	121	104	132
35	Circular	2.8	0.4	4 x 0.8	1.72	39.1	1900	2500	2.0	1.72	41.5	2500	3100	112	96	123	144	124	159
50	Circular	2.8	0.5	4 x 0.8	1.72	41.4	2200	3050	2.0	1.88	44.2	2850	3700	131	113	146	169	146	188
70	Circular	2.8	0.5	4 x 0.8	1.88	45.2	2525	3700	2.0	1.88	47.6	3200	4400	160	138	182	206	178	234
95	Circular	2.8	0.5	4 x 0.8	1.88	48.7	2950	4550	2.5	2.04	52.5	4150	5750	191	165	221	246	212	284
120	Circular	2.8	0.6	4 x 0.8	2.04	52.5	3550	5550	2.5	2.20	56.1	4850	6850	216	187	254	278	240	326
150	Circular	2.8	0.6	4 x 0.8	2.20	55.6	3975	6500	2.5	2.20	59.0	5250	7800	241	208	286	310	268	368
185	Circular	2.8	0.6	4 x 0.8	2.20	59.6	4550	7650	2.5	2.36	63.4	6000	9100	273	236	330	350	302	422
240	Circular	2.8	0.7	4 x 0.8	2.36	65.3	5450	9500	3.15	2.52	70.3	7725	11800	315	277	385	401	353	492
300	Circular	3.0	0.7	4 x 0.8	2.52	71.0	6375	11400	3.15	2.68	76.0	8750	13800	354	312	440	449	395	559
400	Circular	3.3	0.7	4 x 0.8	2.84	79.3	8000	14750	4.0	3.00	85.9	11875	18600	403	355	512	506	445	642

**THREE CORE, ALUMINIUM & COPPER CONDUCTOR, XLPE INSULATED, ARMoured
CABLE CONFORMING TO IS: 7098 (PART-2)**

VOLTAGE GRADE : 6.35/11 kV (E) OR 6.6/6.6 kV (UE)

WEIGHT & DIMENSIONS

Nominal Size of stranded, class-2 conductor as per IS: 8130	Form of conductor strand	Nom thickness of XLPE Insulation	Min thickness of PVC inner sheath	Strip Armoured Cable				Round Wire Armoured Cable				Current Rating						
				Nom Dimension of GI flat strip	Min Thickness of Outer sheath	Approx Overall diameter of Cable with ± 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Nom Dimension of GI Round wire	Min Thickness of Outer sheath with ± 3mm tolerance	Approx Overall diameter of Cable with ± 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Aluminium	In Air @ 40°C	Buried Direct in the Ground @ 30°C	Copper	In Air @ 40°C
Sq.mm.	0	mm	mm	mm x mm	mm	mm	Kg./Km	Kg./Km	mm	mm	Kg./Km	Amps	Amps	Amps	Amps	Amps	Amps	Amps
35	Circular	3.6	0.5	4 x 0.8	1.72	42.7	2200	2800	2.0	1.88	45.3	112	124	144	125	160	160	160
50	Circular	3.6	0.5	4 x 0.8	1.88	45.2	2550	3400	2.5	2.04	48.8	131	148	169	146	191	191	191
70	Circular	3.6	0.5	4 x 0.8	1.88	48.5	2850	4050	2.5	2.04	52.1	161	184	207	179	237	237	237
95	Circular	3.6	0.6	4 x 0.8	2.04	52.5	3350	4950	2.5	2.20	56.1	190	222	245	213	286	286	286
120	Circular	3.6	0.6	4 x 0.8	2.20	56.0	3900	5950	2.5	2.20	59.4	216	256	278	241	329	329	329
150	Circular	3.6	0.6	4 x 0.8	2.20	59.0	4400	6900	2.5	2.36	62.8	242	288	311	269	371	371	371
185	Circular	3.6	0.7	4 x 0.8	2.36	63.5	4925	8050	3.15	2.52	68.3	273	330	349	308	422	422	422
240	Circular	3.6	0.7	4 x 0.8	2.52	68.8	5950	10000	3.15	2.68	73.7	315	387	401	354	493	493	493
300	Circular	3.6	0.7	4 x 0.8	2.68	73.4	6800	11900	3.15	2.84	78.3	354	441	449	396	560	560	560
400	Circular	3.6	0.7	4 x 0.8	2.84	80.5	8200	14950	4.0	3.00	87.1	404	512	506	446	643	643	643

VOLTAGE GRADE : 11/11 kV (UE)

WEIGHT & DIMENSIONS

Nominal Size of stranded, class-2 conductor as per IS: 8130	Form of conductor strand	Nom thickness of XLPE Insulation	Min thickness of PVC Inner sheath	Strip Armoured Cable						Round Wire Armoured Cable				Current Rating					
				Nom Dimension of GI flat strip with ± 3mm tolerance	Min Thickness of Outer sheath	Approx Overall diameter of Cable with ± 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Nom Dimension of GI Round wire	Min Thickness of Outer sheath	Approx Overall diameter of cable with ± 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Aluminium		Copper			
														Buried in the Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C	Buried in the Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C	In Air @ 40°C	In Air @ 40°C
Sq.mm.	0	mm	mm	mm x mm	mm	mm	Kg./Km	Kg./Km	mm	mm	mm	Kg./Km	Kg./Km	Amps	Amps	Amps	Amps	Amps	Amps
35	Circular	5.5	0.5	4 x 0.8	2.04	51.3	3000	3600	2.5	2.20	55.5	4250	4850	112	97	124	144	125	160
50	Circular	5.5	0.6	4 x 0.8	2.20	54.0	3300	4150	2.5	2.20	57.8	4600	5400	131	114	148	169	146	191
70	Circular	5.5	0.6	4 x 0.8	2.20	57.3	3750	4950	2.5	2.36	61.5	5150	6300	161	139	184	207	179	237
95	Circular	5.5	0.6	4 x 0.8	2.36	61.3	4300	5900	3.15	2.52	66.7	6450	8050	190	165	222	245	213	286
120	Circular	5.5	0.7	4 x 0.8	2.36	64.6	4850	6850	3.15	2.52	70.0	7100	9150	216	188	256	278	241	329
150	Circular	5.5	0.7	4 x 0.8	2.52	67.8	5300	7850	3.15	2.68	73.3	7600	10150	242	209	288	311	269	371
185	Circular	5.5	0.7	4 x 0.8	2.68	72.2	5975	9100	3.15	2.84	77.6	8500	11600	273	240	330	349	308	422
240	Circular	5.5	0.7	4 x 0.8	2.84	77.4	6900	10950	3.15	3.00	82.9	9600	13700	315	278	387	401	354	493
300	Circular	5.5	0.7	4 x 0.8	3.0	82.2	7850	12900	4.0	3.00	89.0	11750	16800	354	312	441	449	396	560
400	Circular	5.5	0.7	4 x 0.8	3.0	89.1	9400	16150	4.0	3.00	96.0	13650	20400	404	356	512	506	446	643

THREE CORE, ALUMINIUM & COPPER CONDUCTOR, XLPE INSULATED, ARMoured CABLE CONFORMING TO IS: 7098 (PART-2)

VOLTAGE GRADE : 12.7/22 kV (E)

WEIGHT & DIMENSIONS

Nominal Size of stranded, class-2 conductor as per IS: 8130	Form of conductor strand	Nom thickness of XLPE Insulation	Min thickness of PVC Inner sheath	Strip Armoured Cable					Round Wire Armoured Cable					Current Rating			
				Nom Dimension of GI flat strip	Min Thickness of Outer sheath	Approx Overall diameter of Cable with ± 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Nom Dimension of GI Round wire	Min Thickness of Outer sheath	Approx Overall diameter of Cable with ± 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Aluminium	Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C	In Air @ 40°C
Sq.mm.	0	mm	mm	mm x mm	mm	mm	Kg./Km	Kg./Km	mm	mm	mm	Kg./Km	Kg./Km	Amps	Amps	Amps	Amps
35	Circular	6.0	0.6	4 x 0.8	2.04	53.8	3150	3750	2.5	2.20	57.6	4450	5000	111	127	143	164
50	Circular	6.0	0.6	4 x 0.8	2.20	56.5	3550	4400	2.5	2.36	60.2	4900	5750	130	152	167	196
70	Circular	6.0	0.6	4 x 0.8	2.36	60.1	4100	5300	2.5	2.36	63.5	5500	6700	159	189	204	243
95	Circular	6.0	0.7	4 x 0.8	2.36	63.7	4550	6150	3.15	2.52	68.7	6750	8350	189	227	243	293
120	Circular	6.0	0.7	4 x 0.8	2.52	67.0	5100	7100	3.15	2.68	72.0	7400	9400	215	262	276	336
150	Circular	6.0	0.7	4 x 0.8	2.68	70.2	5650	8200	3.15	2.68	74.9	8100	10650	239	294	307	378
185	Circular	6.0	0.7	4 x 0.8	2.68	74.6	6300	9450	3.15	2.84	79.6	8950	12050	270	336	346	431
240	Circular	6.0	0.7	4 x 0.8	2.84	80.0	7250	11300	4.0	3.00	86.7	11200	15250	312	393	398	503
300	Circular	6.0	0.7	4 x 0.8	3.00	84.7	8200	13300	4.0	3.00	91.1	12300	17350	351	448	446	571
400	Circular	6.0	0.7	4 x 0.8	3.00	91.2	9950	16750	4.0	3.00	97.6	14350	21000	400	519	503	655

THREE CORE, ALUMINIUM & COPPER CONDUCTOR, XLPE INSULATED, ARMoured CABLE CONFORMING TO IS: 7098 (PART-2)

Voltage Grade : 19/33 kV (E)

WEIGHT & DIMENSIONS

Nominal Size of stranded, class-2 conductor as per IS: 8130	Form of conductor strand	Nom thickness of XLPE Insulation	Min thickness of PVC Inner sheath	Strip Armoured Cable					Round Wire Armoured Cable					Current Rating				
				Nom Dimension of GI flat strip	Min Thickness of Outer sheath	Approx Overall diameter of Cable with ± 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Nom Dimension of GI Round wire	Min Thickness of Outer sheath	Approx Overall diameter with ± 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Aluminium		Copper		
														Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C	Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C	
Sq. mm.	0	mm	mm	mm x mm	mm	mm	Kg./Km	Kg./Km	mm	mm	mm	Kg./Km	Kg./Km	Amps	Amps	Amps	Amps	
50	Circular	8.8	0.7	4 x 0.8	2.52	68.8	5150	5950	3.15	2.48	73.9	7500	8350	130	116	152	196	
70	Circular	8.8	0.7	4 x 0.8	2.68	72.6	5550	6750	3.15	2.84	77.5	8100	9250	159	142	189	243	
95	Circular	8.8	0.7	4 x 0.8	2.84	76.4	6200	7850	3.15	3.00	81.5	8850	10500	189	169	227	293	
120	Circular	8.8	0.7	4 x 0.8	2.84	79.3	6900	8900	4.0	3.00	86.1	10800	12850	215	192	262	336	
150	Circular	8.8	0.7	4 x 0.8	3.00	83.0	7450	10000	4.0	3.00	89.4	11400	13900	239	214	294	378	
185	Circular	8.8	0.7	4 x 0.8	3.00	87.0	8200	11300	4.0	3.00	93.4	12300	15450	270	245	336	431	
240	Circular	8.8	0.7	4 x 0.8	3.00	92.1	9300	13300	4.0	3.00	98.5	13650	17700	312	282	393	503	
300	Circular	8.8	0.7	4 x 0.8	3.00	96.5	10250	15300	4.0	3.00	102.9	14850	19900	351	317	448	571	
400	Circular	8.8	0.7	4 x 0.8	3.00	103.0	11750	18500	4.0	3.00	109.4	16700	23450	400	361	519	655	

Voltage Grade : 33/33 kV (UE)

WEIGHT & DIMENSIONS

Nominal Size of stranded, class-2 conductor as per IS: 8130	Form of conductor strand	Nom thickness of XLPE Insulation	Min thickness of PVC Inner sheath	Strip Armoured Cable				Round Wire Armoured Cable				Current Rating					
				Nom Dimension of GI flat strip	Min Thickness of Outer sheath	Approx Overall diameter of Cable with ± 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Nom Dimension of GI Round wire	Min Thickness of Outer sheath	Approx Overall diameter with ± 3mm tolerance	Al Approx weight of cable	Cu Approx weight of cable	Aluminium		Copper	
														Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C	Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C
Sq.mm.	0	mm	mm	mm x mm	mm	mm	Kg./Km	Kg./Km	mm	mm	mm	Kg./Km	Kg./Km	Amps	Amps	Amps	Amps
50	Circular	9.0	0.7	4 x 0.8	2.68	70.3	5650	6450	3.15	2.84	75.7	8200	9000	130	116	152	196
70	Circular	9.0	0.7	4 x 0.8	2.68	73.6	6200	7350	3.15	2.84	79.0	9000	10110	159	142	189	243
95	Circular	9.0	0.7	4 x 0.8	2.84	77.5	6900	8400	4.0	3.0	84.6	9760	11270	189	169	227	293
120	Circular	9.0	0.7	4 x 0.8	3.0	80.7	7580	9490	4.0	3.0	87.5	11770	13680	215	192	262	336
150	Circular	9.0	0.7	4 x 0.8	3.0	83.7	7970	10360	4.0	3.0	90.5	12160	14550	239	214	294	378
185	Circular	9.0	0.7	4 x 0.8	3.0	87.7	8700	11640	4.0	3.0	94.5	13080	16000	270	245	336	431
240	Circular	9.0	0.7	4 x 0.8	3.0	92.7	9670	13500	4.0	3.0	99.5	14300	18150	312	282	393	503
300	Circular	9.0	0.7	4 x 0.8	3.0	97.1	10710	15500	4.0	3.0	103.9	15450	20200	351	317	448	571
400	Circular	9.0	0.7	4 x 0.8	3.0	103.4	11880	18700	4.0	3.0	110.2	19900	26200	400	361	519	655

PVC AND XLPE LT POWER CABLES

KEI INDUSTRIES LIMITED manufactures LT Power Cables with PVC or XLPE insulation of voltage grade upto 3.3 kV conforming to various Indian and International Standard Specifications. KEI also manufactures other types of cables as listed at the end of this catalogue.

CROSS LINKED POLYETHYLENE (XLPE)

XLPE means cross-linked polyethylene or vulcanized polyethylene. The basic material is low density polyethylene. Polyethylene is a thermoset material consisting of long chain of hydrocarbon molecules. At elevated temperature, these molecules tend to move relative to one another so that the material becomes increasingly deformable and eventually melts at the temperature around 110°C.

By means of process similar to the vulcanization of rubber, the polyethylene molecules can be cross-linked. The process of cross-linking or vulcanization consists of producing chemical bonds at interval between the long molecular chain to give a "ladder" effect which prevents slippage between molecules. As a result of cross-linking the material becomes heat resistant and does not soften at higher temperatures. Further it has better resistance to stress cracking and good resistance to ageing in hot air. With the change of structure there is no adverse effect on electrical properties.

Advantages of KEI XLPE CABLES

- ✓ Dielectric losses are very small
- ✓ Higher current carrying capacity
- ✓ Higher short circuit rating 250°C as against 160 °C for PVC
- ✓ KEI XLPE can retain flexibility down upto - 40°C
- ✓ Jointing and termination is easy
- ✓ Light in weight
- ✓ They are not prone to fatigue damages due to vibrations or loading cycles
- ✓ Has better resistance to most chemicals, oils, acids, etc.
- ✓ Can be installed along cable routes without elevation limitations

Comparison of main properties between PVC and XLPE Insulation

Characteristics	Unit	PVC	XLPE
Permittivity (50 Hz, 20° C)	----	4-6	2.3
Dielectric Loss Factor (50 Hz, 20° C)	----	0.05-0.07	0.0004
Volume Resistivity (Insulation Resistance) (27° C)	Ohm-cm (min)	10 ¹³	10 ¹⁴
Maximum Conductor Temperature during continuous operation	Deg C	70	90
Maximum Conductor Temperature during short circuit	Deg C	160	250
Tensile Strength	N/mm ² (min)	12.5	12.5
% Elongation at break	----	Excellent	Medium
Flexibility at 10 ° C	----	Poor	Good
Resistance to abrasion	----	Medium	Good

RATING FACTORS (PVC)

The current ratings in Table - 1 & 2 based on the normal conditions of installation as described below:

- | | | |
|--|---|----------------|
| 1. Maximum condn. temperature | 5. Thermal resistivity of soil | 150° C cm/watt |
| (a) General purpose PVC Insulation 70° C | 6. Thermal resistivity of cable | 650° C cm/watt |
| (b) Heat resisting PVC Insulation 85° C | 7. Max. short-circuit conductor temperature | 160° C |
| 2. Ambient air temperature 40° C | 8. Max. Ambient Air Temperature | 55° C |
| 3. Ground temperature 30° C | 9. Min Ambient Air temperature | -15° C |
| 4. Depth of laying
(for cable laid directly in ground) 75 cm (1.1 kV) | | |

Installation method and Rating factors are given in tables 1 to 6

Table 1 Rating for variations in ground temperature for cables laid directly in ground and in ducts

Ground temperature [°C]	15	20	25	30	35	40	45	50
Rating factor for 70°C PVC	1.17	1.12	1.06	1.0	0.94	0.87	0.79	0.71
Rating factor for 85°C PVC	1.13	1.09	1.04	1.0	0.95	0.9	0.85	0.8

Table 2 Rating factors for variation in ambient air temperature

Air temperature [°C]	25	30	35	40	45	50	55
Rating factor for 70°C PVC	1.22	1.15	1.08	1.0	0.91	0.82	0.71
Rating factor for 85°C PVC	1.15	1.11	1.05	1.0	0.94	0.88	0.82

Table 3

Rating factors of groups of twin and multicore cables laid directly in ground in horizontal formation

No. of cables	Rating factor for axial spacing				
	Touching	15 cm	30 cm	45 cm	60 cm
2 cables	0.78	0.81	0.85	0.88	0.90
3 cables	0.68	0.71	0.77	0.81	0.83
4 cables	0.61	0.65	0.72	0.76	0.79
6 cables	0.53	0.58	0.66	0.71	0.76
8 cables	0.48	0.54	0.62	0.67	0.72

Table 4

Rating Factors of groups of Twin and Multicore cables laid directly in Ground in Tier formation

No. of cables	Rating factor for axial spacing				
	Touching	15 cm	30 cm	45 cm	60 cm
4 cables	0.60	0.67	0.73	0.76	0.78
6 cables	0.51	0.57	0.63	0.67	0.69
8 cables	0.45	0.51	0.57	0.59	0.61

Table 5

Rating factors for variation in depth of laying in ground

Depth of laying (cms)	75	90	105	120	150	150 & above
Rating factor upto 25 sq. mm.	1.00	0.99	0.98	0.97	0.96	0.95

Table 6

Group rating factors for cables installed in Ground, separated by more than 7 cms.

No. of cables	1	2	3	4	5	6
Single core D.C. cables & multicore power cables	1.0	0.90	0.80	0.75	0.70	0.65
Single core A.C. cables	1.0	0.80	0.75	0.70	0.65	0.60

1 CORE, ALUMINIUM CONDUCTOR, GENERAL PURPOSE 70°C PVC INSULATED, ARMoured & UNARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

Nominal Size of stranded, class-2 conductor as per IS: 8130	Min No of wires	ARMoured					UNARMoured			Max D.C Resistance of Conductor at 20°C	Approx A.C Resistance of Conductor at 70°C	ARMoured		UNARMoured		CURRENT RATINGS (a.c.)					
		Thickness of PVC Insulation (nom)	Nom Dimension of Armoured wire	Min Thickness of PVC Outer sheath	Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable (Kg/Km)	Thickness of PVC Insulation (nom)	Nom Thickness of Outer sheath	Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable (Kg/Km)		Approx Reactance at 50 Hz	Approx Capacitance at 50 Hz	Approx Reactance at 50 Hz	Approx Capacitance at 50 Hz	Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C			In Air @ 40°C	
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		Ohms/Km	uF/Km	Ohms/Km	uF/Km	2 Cables	3 Cables	2 Cables	3 Cables	2 Cables	3 Cables
1C x 4	3	1.3	1.4	1.24	11.1	145	1.0	1.8	8.7	85	7.41	8.89	0.158	0.47	0.137	35	31	30	28	29	25
1C x 6	3	1.3	1.4	1.24	11.6	160	1.0	1.8	9.2	100	4.61	5.53	0.148	0.56	0.127	46	39	39	36	38	33
1C x 10	7	1.3	1.4	1.24	12.6	190	1.0	1.8	10.2	120	3.08	3.70	0.138	0.67	0.118	57	49	48	45	48	42
1C x 16	6	1.3	1.4	1.24	13.3	210	1.0	1.8	10.9	140	1.91	2.29	0.128	0.81	0.110	74	64	62	58	63	56
1C x 25	6	1.5	1.4	1.24	14.9	275	1.2	1.8	12.5	200	1.20	1.44	0.120	0.87	0.105	95	82	80	74	85	74
1C x 35	6	1.5	1.4	1.24	15.9	325	1.2	1.8	13.5	225	0.868	1.04	0.114	1.0	0.100	114	97	96	88	103	91
1C x 50	6	1.7	1.4	1.24	17.4	400	1.4	1.8	15.0	300	0.641	0.769	0.110	1.03	0.098	134	115	113	103	124	110
1C x 70	12	1.7	1.4	1.40	19.4	500	1.4	1.8	16.6	375	0.443	0.532	0.103	1.21	0.091	165	141	138	127	157	140
1C x 95	15	1.9	1.6	1.40	21.9	650	1.6	1.8	18.7	490	0.320	0.384	0.101	1.27	0.088	201	169	165	151	198	177
1C x 120	15	1.9	1.6	1.40	23.3	750	1.6	2.0	20.5	575	0.253	0.304	0.096	1.42	0.086	230	192	188	172	230	207
1C x 150	15	2.1	1.6	1.40	25.1	900	1.8	2.0	22.3	700	0.206	0.247	0.094	1.42	0.085	256	214	210	191	261	235
1C x 185	30	2.3	1.6	1.40	27.4	1050	2.0	2.0	24.6	850	0.164	0.197	0.092	1.44	0.084	290	242	237	216	302	274
1C x 240	30	2.5	1.6	1.56	30.6	1325	2.2	2.0	27.4	1050	0.125	0.150	0.09	1.53	0.082	335	280	274	248	357	324
1C x 300	30	2.7	1.6	1.56	33.1	1550	2.4	2.0	29.9	1250	0.100	0.120	0.088	1.56	0.08	377	314	307	277	409	373
1C x 400	53	3.0	2.0	1.56	37.5	2000	2.6	2.2	33.7	1625	0.0778	0.093	0.088	1.56	0.08	430	358	349	314	479	438
1C x 500	53	3.4	2.0	1.72	41.7	2500	3.0	2.2	37.5	2000	0.0605	0.073	0.087	1.57	0.079	486	404	395	354	554	508
1C x 630	53	3.9	2.0	1.88	46.5	3050	3.4	2.4	42.3	2500	0.0469	0.056	0.086	1.57	0.077	547	454	443	395	638	587
1C x 800	53	3.9	2.0	1.88	50.8	3700	3.4	2.4	46.6	3050	0.0367	0.044	0.083	1.75	0.077	609	503	492	437	727	668
1C x 1000	53	3.9	2.5	2.04	57.5	4500	3.4	2.6	52.3	3700	0.0291	0.035	0.082	1.94	0.076	667	550	536	474	816	750

1 CORE, COPPER CONDUCTOR, GENERAL PURPOSE 70°C PVC INSULATED, ARMoured & UNARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

Nominal Size of stranded, class-2 conductor as per IS: 8130	Min No of wires	ARMoured						UNARMoured				Approx A.C Resistance of Conductor at 20°C	ARMoured		UNARMoured		CURRENT RATINGS (a.c.)								
		Thickness of PVC Insulation (nom)	Nom Dimension of Armour wire	Min Thickness of PVC Outer sheath	Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable (kg/Km)	Thickness of PVC Insulation (nom)	Nom Thickness of Outer sheath	Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable (kg/Km)	Approx Reactance at 50 Hz		Approx Capacitance at 50 Hz	Ohms/Km	uF/Km	Approx Reactance at 50 Hz	Approx Capacitance at 50 Hz	Buried Direct in the Ground @ 30°C			In Single way buried Duct @ 30°C			In Air @ 40°C	
																		2 Cables	3 Cables	3 Cables	2 Cables	3 Cables	2 Cables	3 Cables	
																									38
1C x 4	7	1.3	1.4	1.24	11.1	165	1.0	1.8	8.7	105	4.61	5.53	0.158	0.47	0.137	0.58	45	39	38	35	37	32	32		
1C x 6	7	1.3	1.4	1.24	11.6	200	1.0	1.8	9.2	130	3.08	3.70	0.148	0.56	0.127	0.68	56	48	47	44	46	40	40		
1C x 10	7	1.3	1.4	1.24	12.6	240	1.0	1.8	10.2	175	1.83	2.20	0.138	0.67	0.118	0.83	74	64	63	58	63	55	55		
1C x 16	6	1.3	1.4	1.24	13.3	300	1.0	1.8	10.9	230	1.15	1.38	0.128	0.81	0.110	1.01	95	82	80	75	82	72	72		
1C x 25	6	1.5	1.4	1.24	14.9	425	1.2	1.8	12.5	330	0.727	0.87	0.120	0.87	0.105	1.05	123	105	103	95	109	96	96		
1C x 35	6	1.5	1.4	1.24	15.9	525	1.2	1.8	13.5	425	0.524	0.63	0.114	1.00	0.100	1.22	147	125	123	114	133	117	117		
1C x 50	6	1.7	1.4	1.24	17.4	700	1.4	1.8	15.0	575	0.387	0.464	0.110	1.03	0.098	1.22	173	148	145	133	160	142	142		
1C x 70	12	1.7	1.4	1.40	19.4	900	1.4	1.8	16.6	775	0.268	0.322	0.103	1.21	0.091	1.43	213	181	178	163	202	180	180		
1C x 95	15	1.9	1.6	1.40	21.9	1200	1.6	1.8	18.7	1025	0.193	0.232	0.101	1.27	0.088	1.47	259	217	213	194	254	228	228		
1C x 120	18	1.9	1.6	1.40	23.3	1400	1.6	2.0	20.5	1250	0.153	0.184	0.096	1.42	0.086	1.62	295	246	242	220	295	265	265		
1C x 150	18	2.1	1.6	1.40	25.1	1750	1.8	2.0	22.3	1550	0.124	0.149	0.094	1.42	0.085	1.62	329	275	269	245	335	302	302		
1C x 185	30	2.3	1.6	1.40	27.4	2100	2.0	2.0	24.6	1900	0.0991	0.119	0.092	1.44	0.084	1.62	371	309	303	275	386	349	349		
1C x 240	34	2.5	1.6	1.56	30.6	2700	2.2	2.0	27.4	2400	0.0754	0.090	0.090	1.53	0.082	1.72	427	355	348	315	454	412	412		
1C x 300	34	2.7	1.6	1.56	33.1	3250	2.4	2.0	29.9	2950	0.0401	0.072	0.088	1.56	0.08	1.74	477	397	389	350	518	472	472		
1C x 400	53	3.0	2.0	1.56	37.5	4300	2.6	2.2	33.7	3900	0.047	0.056	0.088	1.56	0.08	1.81	538	446	437	392	600	547	547		
1C x 500	53	3.4	2.0	1.72	41.7	5300	3.0	2.2	37.5	4850	0.0366	0.044	0.087	1.57	0.079	1.76	600	496	486	434	684	625	625		
1C x 630	53	3.9	2.0	1.88	46.5	6650	3.4	2.4	42.3	6100	0.0283	0.034	0.086	1.57	0.077	1.77	662	547	535	477	773	708	708		
1C x 800	53	3.9	2.0	1.88	50.8	8300	3.4	2.4	46.6	7600	0.0221	0.027	0.083	1.75	0.077	1.98	718	594	579	516	859	790	790		
1C x 1000	53	3.9	2.5	2.04	57.5	10200	3.4	2.6	52.3	9400	0.0176	0.021	0.082	1.94	0.076	2.20	763	635	613	568	935	868	868		

2 CORE, ALUMINIUM CONDUCTOR, GENERAL PURPOSE 70°C PVC INSULATED, ARMoured & UNARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Min No of wires	Thickness of PVC Insulation (nom)	Min thickness of PVC Inner Sheath	ARMoured						UNARMoured				Max D.C Resistance of Conductor at 20°C	Approx A.C Resistance of Conductor at 70°C	Approx Reactance at 50 Hz	Approx Capacitance at 50 Hz	CURRENT RATINGS (a.c.)		
				Nominal Dimension of Armour		Min Thickness of PVC Outer sheath		Approx Overall diameter of Cable with ± 2 mm tolerance		Approx. Net Wt. of Cable		Nom Thickness of PVC Outer sheath	Approx Overall diameter of Cable with ±2 mm tolerance							Approx weight of cable
				Strip	Wire	Strip	Wire	Strip	Wire	Strip	Wire									
Sq.mm	No's	mm	mm	mm x mm	mm	mm	mm	mm	(Kg/Km)	(Kg/Km)	mm	mm	mm	Kg/Km	Ohm/Km	Ohm/Km	uF/Km	Amps	Amps	
2C x 1.5	1	0.8	0.3	—	1.4	—	1.24	—	14.0	—	390	18.1	21.7	0.126	21	18	16			
2C x 2.5	1	0.9	0.3	—	1.4	—	1.24	—	15.2	—	450	12.1	14.5	0.119	26	22	21			
2C x 4	3	1.0	0.3	—	1.4	—	1.24	—	16.8	—	520	7.41	8.89	0.116	34	29	28			
2C x 6	3	1.0	0.3	—	1.4	—	1.24	—	17.8	—	600	4.61	5.53	0.110	44	38	37			
2C x 10	7	1.0	0.3	—	1.4	—	1.24	—	19.8	—	700	3.08	3.70	0.100	56	47	47			
2C x 16	6	1.0	0.3	4 x 0.8	1.6	1.4	1.4	18.8	20.4	525	675	1.91	2.29	0.097	73	61	61			
2C x 25	6	1.2	0.3	4 x 0.8	1.6	1.4	1.4	20.8	22.4	650	850	1.20	1.44	0.097	94	79	82			
2C x 35	6	1.2	0.3	4 x 0.8	1.6	1.4	1.4	21.8	23.4	750	1000	0.868	1.04	0.097	113	95	100			
2C x 50	6	1.4	0.3	4 x 0.8	1.6	1.4	1.56	24.3	26.2	925	1200	0.641	0.769	0.094	133	112	122			
2C x 70	12	1.4	0.3	4 x 0.8	1.6	1.56	1.56	26.7	28.3	1100	1400	0.443	0.532	0.090	163	137	153			
2C x 95	15	1.6	0.4	4 x 0.8	2.0	1.56	1.56	30.2	32.6	1400	1900	0.320	0.384	0.090	195	164	188			
2C x 120	15	1.6	0.4	4 x 0.8	2.0	1.56	1.72	31.7	34.4	1600	2150	0.253	0.304	0.087	220	185	215			
2C x 150	15	1.8	0.4	4 x 0.8	2.0	1.72	1.72	35.4	37.8	1950	2550	0.206	0.247	0.087	245	207	245			
2C x 185	30	2.0	0.5	4 x 0.8	2.0	1.88	1.88	39.1	41.5	2350	2950	0.164	0.197	0.087	276	234	282			
2C x 240	30	2.2	0.5	4 x 0.8	2.5	2.04	2.04	42.5	45.9	2850	3900	0.125	0.150	0.087	318	270	333			
2C x 300	30	2.4	0.6	4 x 0.8	2.5	2.20	2.20	48.5	51.9	3500	4625	0.100	0.120	0.086	356	303	381			
2C x 400	53	2.6	0.7	4 x 0.8	3.15	2.36	2.52	53.4	58.1	4300	6200	0.0778	0.093	0.086	402	342	440			

2 CORE COPPER GENERAL PURPOSE 70°C ARMoured & UNARMoured PVC ARMoured & UNARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Min No of wires	Thickness of PVC Insulation (nom)	Min thickness of PVC Inner Sheath	ARMoured						UNARMoured			Max D.C Resistance of Conductor at 20 °C	Approx A.C Resistance of Conductor at 70 °C	Approx Reactance at 50 Hz	Approx Capacitance at 50 Hz	CURRENT RATINGS (a.c.)		
				Nominal Dimension of Armour		Min. Thickness of PVC Outer Sheath		Approx Overall diameter of Cable with ± 2 mm tolerance		Approx. Net Wt. of Cable		Nom Thickness of PVC Outer sheath					Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable	
				Strip	Wire	Strip	Wire	Strip	Wire	[Kg/Km]	[Kg/Km]								
Sq.mm	No's	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Ohms/Km	Ohms/Km	uF/Km	Amps	Amps	In Single way Buried Duct @ 30 °C	In Air @ 40 °C
2C x 1.5	1	0.8	0.3	---	1.4	---	1.24	---	14.0	---	400	12.1	14.52	0.126	0.14	25	22	20	20
2C x 2.5	1	0.9	0.3	---	1.4	---	1.24	---	15.2	---	475	7.41	8.89	0.119	0.15	33	28	26	26
2C x 4	7	1.0	0.3	---	1.4	---	1.24	---	16.8	---	550	4.61	5.53	0.116	0.16	43	37	36	36
2C x 6	7	1.0	0.3	---	1.4	---	1.24	---	17.8	---	650	3.08	3.70	0.110	0.19	54	46	45	45
2C x 10	7	1.0	0.3	---	1.4	---	1.24	---	19.8	---	800	1.83	2.20	0.100	0.22	72	61	61	61
2C x 16	6	1.0	0.3	4 x 0.8	1.6	1.4	1.4	18.8	20.4	700	850	1.15	1.38	0.097	0.29	94	79	79	79
2C x 25	6	1.2	0.3	4 x 0.8	1.6	1.4	1.4	20.8	22.4	940	1100	0.727	0.872	0.097	0.32	121	102	106	106
2C x 35	6	1.2	0.3	4 x 0.8	1.6	1.4	1.4	21.8	23.4	1150	1400	0.524	0.629	0.097	0.37	145	122	129	129
2C x 50	6	1.4	0.3	4 x 0.8	1.6	1.4	1.56	24.3	26.2	1500	1750	0.387	0.464	0.094	0.37	172	144	157	157
2C x 70	12	1.4	0.3	4 x 0.8	1.6	1.56	1.56	26.7	28.3	1950	2250	0.268	0.322	0.090	0.44	210	176	197	197
2C x 95	15	1.6	0.4	4 x 0.8	2.0	1.56	1.56	30.2	32.6	2500	3000	0.193	0.232	0.090	0.44	250	210	241	241
2C x 120	18	1.6	0.4	4 x 0.8	2.0	1.56	1.72	31.7	34.4	3000	3550	0.153	0.184	0.087	0.49	281	237	275	275
2C x 150	18	1.8	0.4	4 x 0.8	2.0	1.72	1.72	35.4	37.8	3650	4250	0.124	0.149	0.087	0.49	313	264	313	313
2C x 185	30	2.0	0.5	4 x 0.8	2.0	1.88	1.88	39.1	41.5	4450	5050	0.0991	0.119	0.087	0.49	351	297	358	358
2C x 240	34	2.2	0.5	4 x 0.8	2.5	2.04	2.04	42.5	45.9	5600	6650	0.0754	0.090	0.087	0.50	401	340	420	420
2C x 300	34	2.4	0.6	4 x 0.8	2.5	2.20	2.20	48.5	51.9	6900	8025	0.0601	0.072	0.086	0.52	445	378	477	477
2C x 400	53	2.6	0.7	4 x 0.8	3.15	2.36	2.52	53.4	58.1	8850	10750	0.0470	0.056	0.086	0.53	495	421	543	543

3 CORE, ALUMINIUM CONDUCTOR, GENERAL PURPOSE 70°C PVC INSULATED, ARMoured & UNARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Min No of wires	Thickness of PVC Insulation (nom)	Min thickness of PVC Inner Sheath	ARMoured						UNARMoured			Max D.C Resistance of Conductor at 20°C	Approx A.C Resistance of Conductor at 70°C	Approx Reactance at 50 Hz	Approx Capacitance at 50 Hz	CURRENT RATINGS [a.c.]			
				Nominal Dimension of Armour		Min Thickness of PVC Outer sheath		Approx Overall diameter of Cable with ± 2 mm tolerance		Approx weight of cable		Nom Thickness of PVC Outer sheath					Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable	Buried Direct in the Ground @ 30°C	In Single way In Air @ 40°C
				Strip	Wire	Strip	Wire	Strip	Wire	Strip	Wire									
Sq.mm	No's	mm	mm	mm	mm	mm	mm	mm	mm	(Kg/Km)	(kg/Km)		mm	mm	Ohm/Km	Ohm/Km	uF/Km	Amps	Amps	
3C x 1.5	1	0.8	0.3	---	1.4	---	1.24	---	14.5	---	---	420	1.8	12.7	175	18.1	21.72	0.126	15	14
3C x 2.5	1	0.9	0.3	---	1.4	---	1.24	---	15.8	---	---	500	1.8	14.0	225	12.1	14.52	0.119	22	18
3C x 4	3	1.0	0.3	---	1.4	---	1.24	---	17.6	---	---	550	1.8	15.8	275	7.41	8.89	0.116	29	25
3C x 6	3	1.0	0.3	---	1.4	---	1.24	---	18.6	---	---	625	1.8	16.8	325	4.61	5.53	0.110	38	32
3C x 10	7	1.0	0.3	---	1.4	---	1.4	---	21.2	---	---	750	1.8	19.0	400	3.08	3.70	0.100	47	40
3C x 16	6	1.0	0.3	4 x 0.8	1.6	1.4	1.4	18.6	20.2	600	750	750	1.8	17.8	375	1.91	2.29	0.097	61	51
3C x 25	6	1.2	0.3	4 x 0.8	1.6	1.4	1.4	21.3	22.9	750	1000	1000	2.0	20.9	575	1.20	1.44	0.097	78	66
3C x 35	6	1.2	0.3	4 x 0.8	1.6	1.4	1.4	23.1	24.7	900	1150	1150	2.0	22.7	700	0.868	1.04	0.097	94	79
3C x 50	6	1.4	0.3	4 x 0.8	1.6	1.56	1.56	26.4	28.0	1150	1450	1450	2.0	25.7	900	0.641	0.769	0.094	111	93
3C x 70	12	1.4	0.4	4 x 0.8	2.0	1.56	1.56	29.9	32.0	1450	2000	2000	2.2	29.3	1150	0.443	0.532	0.090	136	115
3C x 95	15	1.6	0.4	4 x 0.8	2.0	1.56	1.72	33.8	36.2	1800	2450	2450	2.2	33.3	1450	0.320	0.384	0.090	163	138
3C x 120	15	1.6	0.4	4 x 0.8	2.0	1.72	1.72	37.0	39.4	2150	2800	2800	2.2	36.4	1750	0.253	0.304	0.087	185	156
3C x 150	15	1.8	0.5	4 x 0.8	2.0	1.88	1.88	40.1	42.5	2600	3250	3250	2.4	39.5	2150	0.206	0.247	0.087	206	175
3C x 185	30	2.0	0.5	4 x 0.8	2.5	1.88	2.04	44.2	47.9	3100	4250	4250	2.6	44.0	2650	0.164	0.197	0.087	234	198
3C x 240	30	2.2	0.6	4 x 0.8	2.5	2.20	2.20	50.3	53.7	4000	5150	5150	2.8	49.9	3550	0.125	0.150	0.087	271	230
3C x 300	30	2.4	0.6	4 x 0.8	2.5	2.36	2.36	55.0	58.4	4800	6100	6100	3.0	54.7	4050	0.100	0.120	0.086	305	260
3C x 400	53	2.6	0.7	4 x 0.8	3.15	2.52	2.68	62.6	67.7	6000	8200	8200	3.4	62.8	5200	0.0778	0.093	0.086	348	297
																0.0778	0.093	0.086	348	297

3 CORE, COPPER CONDUCTOR, GENERAL PURPOSE 70°C PVC INSULATED, ARMoured & UNARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Min No of wires	Thickness of PVC Insulation (nom)	Min thickness of PVC Inner Sheath	ARMoured						UNARMoured			Max D.C Resistance of Conductor at 20°C	Approx A.C Resistance of Conductor at 70°C	Approx Reactance at 50 Hz	Approx Capacitance at 50 Hz	CURRENT RATINGS [a.c.]						
				Nominal Dimension of Armour		Min Thickness of PVC Outer sheath		Approx Overall diameter of Cable with ± 2 mm tolerance		Approx weight of cable		Nom Thickness of PVC Outer sheath					Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable	Buried Direct in the Ground @ 30°C	In Single way In Air @ 40°C			
				Strip	Wire	Strip	Wire	Strip	Wire	Strip	Wire												
Sq.mm	No's	mm	mm	mm	mm	mm	mm	[Kg/Km]	[Kg/Km]	mm	mm	Kg/Km	Ohm/Km	Ohm/Km	uF/Km	Amps	Amps						
3C x 1.5	1	0.8	0.3	---	1.4	---	---	1.24	---	14.5	---	---	450	1.8	12.7	200	12.1	14.52	0.126	0.14	21	18	17
3C x 2.5	1	0.9	0.3	---	1.4	---	---	1.24	---	15.8	---	---	525	1.8	14.0	250	7.41	8.89	0.119	0.15	28	24	23
3C x 4	7	1.0	0.3	---	1.4	---	---	1.24	---	17.6	---	---	625	1.8	15.8	350	4.61	5.53	0.116	0.41	37	31	30
3C x 6	7	1.0	0.3	---	1.4	---	---	1.24	---	18.6	---	---	725	1.8	16.8	425	3.08	3.70	0.110	0.47	46	39	39
3C x 10	7	1.0	0.3	---	1.4	---	---	1.4	---	21.2	---	---	950	1.8	19.0	575	1.83	2.20	0.100	0.56	61	51	53
3C x 16	6	1.0	0.3	4 x 0.8	1.6	1.4	1.4	18.6	20.2	20.2	18.6	850	1050	1.8	17.8	650	1.15	1.38	0.097	0.76	78	66	67
3C x 25	6	1.2	0.3	4 x 0.8	1.6	1.4	1.4	21.3	22.9	22.9	21.3	1200	1400	2.0	20.9	1000	0.727	0.872	0.097	0.86	101	85	90
3C x 35	6	1.2	0.3	4 x 0.8	1.6	1.4	1.4	23.1	24.7	24.7	23.1	1550	1800	2.0	22.7	1300	0.524	0.629	0.097	0.98	121	102	110
3C x 50	6	1.4	0.3	4 x 0.8	1.6	1.56	1.56	26.4	28.0	28.0	26.4	2000	2300	2.0	25.7	1750	0.387	0.464	0.094	1.02	143	120	134
3C x 70	12	1.4	0.4	4 x 0.8	2.0	1.56	1.56	29.9	32.0	32.0	29.9	2700	3150	2.2	29.3	2350	0.268	0.322	0.090	1.18	175	147	169
3C x 95	15	1.6	0.4	4 x 0.8	2.0	1.56	1.72	33.8	36.2	36.2	33.8	3550	4150	2.2	33.3	3100	0.193	0.232	0.090	1.20	210	177	209
3C x 120	18	1.6	0.4	4 x 0.8	2.0	1.72	1.72	37.0	39.4	39.4	37.0	4350	5000	2.2	36.4	3800	0.153	0.184	0.087	1.31	237	200	238
3C x 150	18	1.8	0.5	4 x 0.8	2.0	1.88	1.88	40.1	42.5	42.5	40.1	5300	5950	2.4	39.5	4700	0.124	0.149	0.087	1.31	265	224	272
3C x 185	30	2.0	0.5	4 x 0.8	2.5	1.88	2.04	44.2	47.9	47.9	44.2	6450	7600	2.6	44.0	5800	0.0991	0.119	0.087	1.31	300	254	314
3C x 240	34	2.2	0.6	4 x 0.8	2.5	2.20	2.20	50.3	53.7	53.7	50.3	8200	9500	2.8	49.9	7400	0.0754	0.090	0.087	1.34	345	293	371
3C x 300	34	2.4	0.6	4 x 0.8	2.5	2.36	2.36	55.0	58.4	58.4	55.0	10000	11400	3.0	54.7	9100	0.0601	0.072	0.086	1.41	387	330	425
3C x 400	53	2.6	0.7	4 x 0.8	3.15	2.52	2.68	62.6	67.7	67.7	62.6	13050	15300	3.4	62.8	12100	0.047	0.056	0.086	1.45	436	372	490

3.5 CORE, COPPER CONDUCTOR, GENERAL PURPOSE 70°C PVC INSULATED, ARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Min No. of wires (main/neutral)	Thickness of PVC Insulation (nom./main/neutral)	Min thickness of PVC inner Sheath	Nominal Dimension of Armour		Min Thickness of PVC Outer sheath		Approx weight of cable		Max D.C Resistance of Conductor at 20°C	Approx A.C Resistance of Conductor at 70°C	Approx Reactance at 50 Hz	Approx Capacitance at 50 Hz	CURRENT RATINGS (a.c.)		
				Strip	Wire	Strip	Wire	Strip	Wire					Buried Direct in the Ground buried Duct @ 30°C	In Single way In Air @ 40°C	
Sq.mm	No's	mm	mm	mm x mm	mm	mm	mm	mm	mm	Ohm/Km	Ohm/Km	Ohm/Km	uF/Km	Amps	Amps	Amps
3.5C x 25/16	6/6	1.2/1.0	0.3	4 x 0.8	1.6	1.4	1.4	23.8	25.4	0.727	0.872	0.097	0.86	101	85	90
3.5C x 35/16	6/6	1.2/1.0	0.3	4 x 0.8	1.6	1.4	1.4	24.8	26.4	0.524	0.629	0.097	0.98	121	102	110
3.5C x 50/25	6/6	1.4/1.2	0.3	4 x 0.8	1.6	1.56	1.56	28.4	30.0	0.387	0.464	0.094	1.02	143	120	134
3.5C x 70/35	12/6	1.4/1.2	0.4	4 x 0.8	2.0	1.56	1.56	32.5	34.9	0.268	0.322	0.09	1.18	175	147	169
3.5C x 95/50	15/6	1.6/1.4	0.4	4 x 0.8	2.0	1.56	1.72	36.2	38.9	0.193	0.232	0.09	1.2	210	177	209
3.5C x 120/70	18/12	1.6/1.4	0.5	4 x 0.8	2.0	1.72	1.88	39.3	42.1	0.153	0.184	0.087	1.31	237	200	238
3.5C x 150/70	18/12	1.8/1.4	0.5	4 x 0.8	2.0	1.88	1.88	44.0	46.4	0.124	0.149	0.087	1.31	265	224	272
3.5C x 185/95	30/15	2.0/1.6	0.5	4 x 0.8	2.5	2.04	2.04	48.8	52.2	0.0991	0.119	0.087	1.31	300	254	314
3.5C x 240/120	34/18	2.2/1.6	0.6	4 x 0.8	2.5	2.2	2.36	55.2	58.9	0.0754	0.090	0.087	1.34	345	293	371
3.5C x 300/150	34/18	2.4/1.8	0.6	4 x 0.8	3.15	2.36	2.52	59.7	64.7	0.0601	0.072	0.086	1.41	387	330	425
3.5C x 400/185	53/30	2.6/2.0	0.7	4 x 0.8	3.15	2.68	2.68	68.6	73.3	0.047	0.056	0.086	1.45	436	372	490

3.5 CORE, COPPER CONDUCTOR, GENERAL PURPOSE 70°C PVC INSULATED, UNARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Min No. of wires (main/neutral)	Thickness of PVC Insulation (nom./main/neutral)	TMin thickness of PVC inner Sheath	Nom Thickness of PVC Outer Sheath	Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable	Max D.C Resistance of Conductor at 20°C	Approx A.C Resistance of Conductor at 70°C	Approx Reactance at 50 Hz	Approx Capacitance	CURRENT RATINGS (a.c.)		
											Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C	In Air @ 40°C
Sq.mm	No's	mm	mm	mm	mm	Kg/Km	Ohm/Km	Ohm/Km	Ohm/Km	uF/Km	Amps	Amps	Amps
3.5C x 25/16	6/6	1.2/1.0	0.3	2.0	23.4	1150	0.727	0.872	0.097	0.86	101	85	90
3.5C x 35/16	6/6	1.2/1.0	0.3	2.0	24.4	1450	0.524	0.629	0.097	0.98	121	102	110
3.5C x 50/25	6/6	1.4/1.2	0.3	2.0	27.7	2000	0.387	0.464	0.094	1.02	143	120	134
3.5C x 70/35	12/6	1.4/1.2	0.4	2.2	32.2	2700	0.268	0.322	0.090	1.18	175	147	169
3.5C x 95/50	15/6	1.6/1.4	0.4	2.2	35.9	3600	0.193	0.232	0.090	1.2	210	177	209
3.5C x 120/70	18/12	1.6/1.4	0.5	2.4	39.1	4500	0.153	0.184	0.087	1.31	237	200	238
3.5C x 150/70	18/12	1.8/1.4	0.5	2.4	43.4	5400	0.124	0.149	0.087	1.31	265	224	272
3.5C x 185/95	30/15	2.0/1.6	0.5	2.6	48.3	6700	0.0991	0.119	0.087	1.31	300	254	314
3.5C x 240/120	34/18	2.2/1.6	0.6	3.0	55.2	8600	0.0754	0.090	0.087	1.34	345	293	371
3.5C x 300/150	34/18	2.4/1.8	0.6	3.2	59.8	10500	0.0601	0.072	0.086	1.41	387	330	425
3.5C x 400/185	53/30	2.6/2.0	0.7	3.4	68.4	13900	0.047	0.056	0.086	1.45	436	372	490

3.5 CORE, ALUMINIUM CONDUCTOR, GENERAL PURPOSE 70°C PVC INSULATED, ARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Min No of wires (main/neutral)	Thickness of PVC Insulation (nom) (main/neutral)	Min thickness of PVC Inner Sheath	Nominal Dimension of Armour		Min Thickness of PVC Outer sheath		Approx Overall diameter of Cable with ± 2 mm tolerance		Approx weight of cable		Max D.C Resistance of Conductor at 20°C	Approx A.C Resistance of Conductor at 70°C	Approx Reactance at 50 Hz	Approx Capacitance at 50 Hz	CURRENT RATINGS [a.c.]		
				Strip	Wire	Strip	Wire	Strip	Wire	Strip	Wire					Buried Direct in the Ground buried Duct @ 30°C	In Single way buried Duct @ 30°C	In Air @ 40°C
Sq.mm	No's	mm	mm	mm x mm	mm	mm	mm	mm	mm	(Kg/Km)	(Kg/Km)	Ohm/Km	Ohm/Km	Ohm/Km	uF/Km	Amps	Amps	Amps
3.5C x 25/16	6/6	1.2/1.0	0.3	4 x 0.8	1.6	1.40	1.40	23.8	25.4	900	1150	1.20	1.44	0.097	0.86	78	66	70
3.5C x 35/16	6/6	1.2/1.0	0.3	4 x 0.8	1.6	1.40	1.40	24.8	26.4	1000	1300	0.868	1.04	0.097	0.98	94	79	85
3.5C x 50/25	6/6	1.4/1.2	0.3	4 x 0.8	1.6	1.56	1.56	28.4	30.0	1300	1600	0.641	0.769	0.094	1.02	111	93	104
3.5C x 70/35	12/6	1.4/1.2	0.4	4 x 0.8	2.0	1.56	1.56	32.5	34.9	1650	2200	0.443	0.532	0.090	1.18	136	115	131
3.5C x 95/50	15/6	1.6/1.4	0.4	4 x 0.8	2.0	1.56	1.72	36.2	38.9	2075	2700	0.320	0.384	0.090	1.20	163	138	162
3.5C x 120/70	15/12	1.6/1.4	0.5	4 x 0.8	2.0	1.72	1.88	39.3	42.1	2500	3200	0.253	0.304	0.087	1.31	185	156	186
3.5C x 150/70	15/12	1.8/1.4	0.5	4 x 0.8	2.0	1.88	1.88	44.0	46.4	3000	3700	0.206	0.247	0.087	1.31	206	175	212
3.5C x 185/95	30/15	2.0/1.6	0.5	4 x 0.8	2.5	2.04	2.04	48.8	52.2	3600	4850	0.164	0.197	0.087	1.31	234	198	245
3.5C x 240/120	30/15	2.2/1.6	0.6	4 x 0.8	2.5	2.20	2.36	55.2	58.9	4600	5750	0.125	0.150	0.087	1.34	271	230	291
3.5C x 300/150	30/15	2.4/1.8	0.6	4 x 0.8	3.15	2.36	2.52	59.7	64.7	5400	7600	0.100	0.120	0.086	1.41	305	260	335
3.5C x 400/185	53/30	2.6/2.0	0.7	4 x 0.8	3.15	2.68	2.68	68.6	73.3	6850	9300	0.0778	0.093	0.086	1.45	348	297	390

3.5 CORE, ALUMINIUM CONDUCTOR, GENERAL PURPOSE 70°C PVC INSULATED, UNARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Min No of wires (main/neutral)	Thickness of PVC Insulation (nom) (main/neutral)	Min thickness of PVC Inner Sheath	Nom thickness of PVC Outer Sheath	Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable	Max D.C Resistance of Conductor at 20°C	Approx A.C Resistance of Conductor at 70°C	Approx Reactance at 50 Hz	Approx Capacitance at 50 Hz	CURRENT RATINGS [a.c.]		
											Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C	In Air @ 40°C
Sq.mm	No's	mm	mm	mm	mm	Kg/Km	Ohm/Km	Ohm/Km	Ohm/Km	uF/Km	Amps	Amps	Amps
3.5C x 25/16	6/6	1.2/1.0	0.3	2.0	23.4	650	1.20	1.44	0.097	0.86	78	66	70
3.5C x 35/16	6/6	1.2/1.0	0.3	2.0	24.4	750	0.868	1.042	0.097	0.98	94	79	85
3.5C x 50/25	6/6	1.4/1.2	0.3	2.0	27.7	1025	0.641	0.769	0.094	1.02	111	93	104
3.5C x 70/35	12/6	1.4/1.2	0.4	2.2	32.2	1350	0.443	0.532	0.090	1.18	136	115	131
3.5C x 95/50	15/6	1.6/1.4	0.4	2.2	35.9	1700	0.320	0.384	0.090	1.20	163	138	162
3.5C x 120/70	15/12	1.6/1.4	0.5	2.4	39.1	2100	0.253	0.304	0.087	1.31	185	156	186
3.5C x 150/70	15/12	1.8/1.4	0.5	2.4	43.4	2500	0.206	0.247	0.087	1.31	206	175	212
3.5C x 185/95	30/15	2.0/1.6	0.5	2.6	48.3	3025	0.164	0.197	0.087	1.31	234	198	245
3.5C x 240/120	30/15	2.2/1.6	0.6	3.0	55.2	3850	0.125	0.150	0.087	1.34	271	230	291
3.5C x 300/150	30/15	2.4/1.8	0.6	3.2	59.8	4750	0.100	0.120	0.086	1.41	305	260	335
3.5C x 400/185	53/30	2.6/2.0	0.7	3.4	68.4	6050	0.0778	0.093	0.086	1.45	348	297	390

4 CORE ALUMINIUM GENERAL PURPOSE 70°C PVC ARMoured & U NARMoured POWER CARLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Min No of wires	Thickness of PVC Insulation (nom)	Min thickness of PVC Inner Sheath	ARMURED						UNARMURED			Approx A.C Resistance of Conductor at 70°C	Approx Reactance at 50 Hz	Approx Capacitance at 50 Hz	CURRENT RATINGS(a.c.)					
				Nominal Dimension of Armour		Min Thickness of PVC Outer sheath		Approx Overall diameter of Cable with ± 2 mm tolerance		Approx weight of cable		Nominal thickness of Outer Sheath				Overall Diameter (Approx) ± 2 mm	Net Weight of Cable (Approx) [Kg/Km]	Max D.C Resistance of Conductor at 20°C	Approx Resistance at 50 Hz	Buried Direct in the Ground @ 30°C	In Single way/In Air @ 40°C
				Strip	Wire	Strip	Wire	Strip	Wire	Strip	Wire										
Sq.mm	No's	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	Ohm/Km	Ohm/Km	Ohm/Km	uF/Km	Amps	Amps			
4C x 1.5	1	0.8	0.3	-	1.4	-	1.24	-	15.4	-	450	18.1	21.7	21.7	0.126	0.14	18	15			
4C x 2.5	1	0.9	0.3	-	1.4	-	1.24	-	16.8	-	550	12.1	14.5	14.5	0.119	0.15	22	19			
4C x 4	3	1.0	0.3	-	1.4	-	1.24	-	18.8	-	625	7.41	8.89	8.89	0.116	0.41	29	25			
4C x 6	3	1.0	0.3	-	1.4	-	1.24	-	20.0	-	750	4.61	5.53	5.53	0.110	0.47	38	32			
4C x 10	7	1.0	0.3	4 x 0.8	1.6	1.4	1.4	21.6	23.0	750	950	3.08	3.70	3.70	0.100	0.56	47	40			
4C x 16	6	1.0	0.3	4 x 0.8	1.6	1.4	1.4	22.2	23.8	725	950	1.91	2.29	2.29	0.097	0.76	61	51			
4C x 25	6	1.2	0.3	4 x 0.8	1.6	1.4	1.4	23.6	25.2	900	1150	1.20	1.44	1.44	0.097	0.86	78	66			
4C x 35	6	1.2	0.3	4 x 0.8	1.6	1.4	1.56	25.9	27.8	1100	1400	0.868	1.04	1.04	0.097	0.98	94	79			
4C x 50	6	1.4	0.4	4 x 0.8	2.0	1.56	1.56	30.3	32.7	1450	1950	0.641	0.769	0.769	0.094	1.02	111	93			
4C x 70	12	1.4	0.4	4 x 0.8	2.0	1.56	1.56	33.4	35.8	1800	2350	0.443	0.532	0.532	0.09	1.18	136	115			
4C x 95	15	1.6	0.4	4 x 0.8	2.0	1.72	1.72	38.2	40.6	2300	2950	0.320	0.384	0.384	0.09	1.20	163	138			
4C x 120	15	1.6	0.5	4 x 0.8	2.0	1.88	1.88	41.7	44.1	2750	3500	0.253	0.304	0.304	0.087	1.31	185	156			
4C x 150	15	1.8	0.5	4 x 0.8	2.5	1.88	2.04	44.7	48.4	3250	4400	0.206	0.247	0.247	0.087	1.31	206	175			
4C x 185	30	2.0	0.6	4 x 0.8	2.5	2.04	2.2	50.1	53.8	4000	5250	0.164	0.197	0.197	0.087	1.31	234	198			
4C x 240	30	2.2	0.6	4 x 0.8	2.5	2.36	2.36	56.7	60.1	5000	6450	0.125	0.150	0.150	0.087	1.34	271	230			
4C x 300	30	2.4	0.7	4 x 0.8	3.15	2.52	2.68	62.9	68.0	6100	8300	0.100	0.120	0.120	0.086	1.41	305	260			
4C x 400	53	2.6	0.7	4 x 0.8	3.15	2.84	2.84	70.6	75.3	7650	10100	0.0778	0.093	0.093	0.086	1.45	348	297			

4 CORE, COPPER CONDUCTOR, GENERAL PURPOSE 70°C PVC INSULATED, ARMoured & UNARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Min No of wires	Thickness of PVC Insulation [nom]	Min thickness of PVC Inner Sheath	ARMoured						UNARMoured			Max D.C Resistance of Conductor at 20°C	Approx A.C Resistance of Conductor at 70°C	Approx Reactance at 50 Hz	Approx Capacitance at 50 Hz	CURRENT RATINGS [a.c.]																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
				Nominal Dimension of Armour		Min Thickness of PVC Outer sheath		Approx Overall diameter of Cable with ± 2 mm tolerance		Approx weight of cable		Nominal thickness of Outer Sheath					Overall Diameter (Approx) ± 2 mm	Net Weight of Cable (Approx)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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RATING FACTORS (XLPE)

The current ratings in Table - 1 & 2 based on the normal conditions of installation as described below:

- | | | | |
|---|----------------|--|----------------|
| 1. Maximum condn. temperature | 90° C | 5. Thermal resistivity of soil | 150° C cm/watt |
| 2. Ambient air temperature | 40° C | 6. Max-short-circuit conductor temperature | 250° C cm/watt |
| 3. Ground temperature | 30° C | 7. Max Ambient Air temperature | 55° C |
| 4. Depth of laying
(for cable laid directly in ground) | 75 cm (1.1 kV) | | |

Installation method and Rating factors are given in tables 1 to 4

Table 1

Rating for variations in ground temperature for cables laid directly in ground and in ducts

Ground temperature °C	15	20	25	30	35	40	45	50
Rating Factor	1.12	1.08	1.03	1.00	0.96	0.91	0.87	0.82

Table 2

Rating Factors for Variation in Ambient Air Temperature

Air temperature	20°C	25	30	35	40	45	50	55
Rating Factor	1.18	1.14	1.10	1.04	1.00	0.95	0.90	0.84

Table 3

Rating Factors of groups of cables laid directly in Ground in Horizontal formation

No. of Cables	Rating factor for Axial spacing			
	Touching	15 cm	30 cm	45 cm
2 cables	0.79	0.82	0.87	0.90
3 cables	0.69	0.75	0.79	0.83
4 cables	0.62	0.69	0.74	0.79
5 cables	0.58	0.65	0.72	0.76
6 cables	0.54	0.61	0.69	0.75

Table 4

Rating Factors for Variation in Depth of laying in Ground

Depth of laying	Size		
	Upto 25 mm ²	25 to 300 mm ²	Above 300 mm ²
75 cm	1.00	1.00	1.00
90 cm	0.99	0.98	0.97
105 cm	0.98	0.97	0.96
120 cm	0.97	0.96	0.95
150 cm	0.96	0.94	0.92
Above 180 cm	0.95	0.93	0.91

1 CORE, ALUMINIUM CONDUCTOR, XLPE INSULATED, ARMoured & UNARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

Nominal Size of stranded, class-2 conductor as per IS: 8130	Min No of wires	ARMURED						UNARMURED				Max D.C Resistance of Conductor at 20°C	Approx A.C Resistance of Conductor at 90°C	ARMURED		UNARMURED		CURRENT RATING				
		Thickness of XLPE Insulation (nom)	Nom Dimension of Armour wire	Min Thickness of PVC Outer sheath	Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable Kg/Km	Thickness of XLPE Insulation (nom)	Nom Thickness of Outer sheath	Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable Kg/Km	2 Cables [Amps]			3 Cables [Amps]	Approx Reactance at 50 Hz	Approx Capacitance at 50 Hz	Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C	In Air @ 40°C			
Sq.mm	No's	No's	mm	mm	Kg/Km	Kg/Km	mm	mm	mm	Kg/Km	Ohm/Km	Ohm/Km	Ohm/Km	uF/Km	Ohm/Km	uF/Km	2 Cables [Amps]	3 Cables [Amps]	2 Cables [Amps]	3 Cables [Amps]		
1C x 4	1	-	-	-	-	-	0.7	1.8	7.8	70	7.41	9.48	-	-	0.132	0.29	43	37	36	34	38	33
1C x 4	6	-	-	-	-	-	0.7	1.8	8.1	70	7.41	9.48	-	-	0.132	0.29	43	37	36	34	38	33
1C x 6	1	-	-	-	-	-	0.7	1.8	8.3	85	4.61	5.90	-	-	0.123	0.34	55	47	47	43	50	43
1C x 6	6	-	-	-	-	-	0.7	1.8	8.6	85	4.61	5.90	-	-	0.123	0.34	55	47	47	43	50	43
1C x 10	1	-	-	-	-	-	0.7	1.8	9.1	100	3.08	3.94	0.134	0.32	0.114	0.43	69	59	58	54	64	55
1C x 10	6	-	-	-	-	-	0.7	1.8	9.6	100	3.08	3.94	0.134	0.32	0.114	0.43	69	59	58	54	64	55
1C x 16	6	1.0	1.4	1.24	12.7	225	0.7	1.8	10.3	125	1.91	2.44	0.125	0.38	0.108	0.51	89	76	75	69	84	72
1C x 25	6	1.2	1.4	1.24	14.3	250	0.9	1.8	11.9	170	1.20	1.54	0.116	0.40	0.102	0.52	115	98	96	89	112	98
1C x 35	6	1.2	1.4	1.24	15.3	300	0.9	1.8	12.9	200	0.868	1.11	0.110	0.47	0.097	0.60	137	116	115	106	137	119
1C x 50	6	1.3	1.4	1.24	16.6	350	1.0	1.8	14.2	250	0.641	0.820	0.103	0.50	0.092	0.63	161	137	135	124	165	145
1C x 70	12	1.4	1.4	1.24	18.4	450	1.1	1.8	16.0	325	0.443	0.567	0.099	0.55	0.088	0.68	198	168	165	151	209	185
1C x 95	15	1.4	1.6	1.40	20.9	575	1.1	1.8	17.7	425	0.320	0.410	0.097	0.64	0.085	0.79	243	202	199	181	264	235
1C x 120	15	1.5	1.6	1.40	22.5	700	1.2	1.8	19.3	500	0.253	0.324	0.093	0.67	0.082	0.79	276	230	226	206	308	276
1C x 150	15	1.7	1.6	1.40	24.3	800	1.4	2.0	21.5	625	0.206	0.264	0.091	0.67	0.082	0.79	308	256	252	229	350	314
1C x 185	30	1.9	1.6	1.40	26.6	950	1.6	2.0	23.8	750	0.164	0.210	0.090	0.67	0.082	0.79	349	290	285	258	406	366
1C x 240	30	2.0	1.6	1.40	29.2	1150	1.7	2.0	26.4	925	0.125	0.160	0.086	0.72	0.079	0.84	404	335	329	298	480	434
1C x 300	30	2.1	1.6	1.56	31.9	1400	1.8	2.0	28.7	1100	0.100	0.128	0.085	0.75	0.078	0.86	454	376	369	333	551	500
1C x 400	53	2.4	2.0	1.56	36.3	1850	2.0	2.2	32.5	1450	0.0778	0.100	0.085	0.75	0.077	0.88	518	429	421	378	647	589
1C x 500	53	2.6	2.0	1.56	39.7	2200	2.2	2.2	35.9	1800	0.0605	0.077	0.083	0.77	0.076	0.9	588	485	476	426	751	685
1C x 630	53	2.8	2.0	1.72	44.1	2700	2.4	2.2	39.9	2200	0.0469	0.060	0.082	0.81	0.075	0.94	663	546	536	477	868	793
1C x 800	53	3.1	2.0	1.88	49.4	3350	2.6	2.4	45.0	2750	0.0367	0.047	0.081	0.88	0.075	0.97	740	608	596	528	992	907
1C x 1000	53	3.3	2.5	2.04	56.3	4200	2.8	2.6	51.1	3400	0.0291	0.037	0.081	0.88	0.068	1.01	812	665	652	575	1117	1022

1 CORE, COPPER CONDUCTOR, XLPE INSULATED, ARMoured & UNARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

Nominal Size of stranded, class-2 conductor as per IS: 8130	Min No of wires	ARMoured				UNARMoured				Approx A.C Resistance of Conductor at 20°C	Approx A.C Resistance of Conductor at 90°C	ARMoured		UNARMoured		CURRENT RATING				
		Thickness of Insulation (nom)	Nom Dimension of Armour wire	Min Thickness of PVC Outer sheath	Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable	Thickness of Insulation (nom)	Nom Thickness of Outer sheath	Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable		Approx Ohm/Km at 50 Hz	Approx Reactance at 50 Hz	Approx Ohm/Km at 50 Hz	Approx Capacitance at 50 Hz	Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C	2 Cables [Amps]	3 Cables [Amps]	In Air @ 40°C
Sq.mm	No's	mm	mm	mm	mm	Kg/Km	mm	mm	mm	Kg/Km	Ohm/Km	Ohm/Km	uF/Km	Ohm/Km	uF/Km	2 Cables [Amps]	3 Cables [Amps]	2 Cables [Amps]	3 Cables [Amps]	3 Cables [Amps]
1C x 4	1	-	-	-	-	-	0.7	1.8	7.8	95	4.61	5.90	-	0.132	0.29	54	47	46	43	41
1C x 4	7	-	-	-	-	-	0.7	1.8	8.1	100	4.61	5.90	-	0.132	0.29	54	47	46	43	41
1C x 6	1	-	-	-	-	-	0.7	1.8	8.3	115	3.08	3.94	-	0.123	0.34	67	58	57	53	52
1C x 6	7	-	-	-	-	-	0.7	1.8	8.6	125	3.08	3.94	-	0.123	0.34	67	58	57	53	52
1C x 10	7	1.0	1.4	1.24	12.0	225	0.7	1.8	9.6	170	1.83	2.34	0.134	0.32	0.43	90	77	76	70	71
1C x 16	6	1.0	1.4	1.24	12.7	300	0.7	1.8	10.3	210	1.15	1.47	0.125	0.38	0.51	115	98	97	89	94
1C x 25	6	1.2	1.4	1.24	14.3	375	0.9	1.8	11.9	300	0.727	0.931	0.116	0.40	0.52	148	126	124	114	126
1C x 35	6	1.2	1.4	1.24	15.3	450	0.9	1.8	12.9	400	0.524	0.671	0.110	0.47	0.60	177	150	148	136	154
1C x 50	6	1.3	1.4	1.24	16.6	625	1.0	1.8	14.2	550	0.387	0.495	0.103	0.50	0.63	208	177	174	160	187
1C x 70	12	1.4	1.4	1.24	18.4	825	1.1	1.8	16.0	725	0.268	0.343	0.099	0.55	0.68	255	216	213	195	238
1C x 95	15	1.4	1.6	1.40	20.9	1100	1.1	1.8	17.7	950	0.193	0.247	0.097	0.64	0.79	312	260	256	233	303
1C x 120	18	1.5	1.6	1.40	22.5	1350	1.2	1.8	19.3	1200	0.153	0.196	0.093	0.67	0.79	355	295	291	264	354
1C x 150	18	1.7	1.6	1.40	24.3	1650	1.4	2.0	21.5	1450	0.124	0.159	0.091	0.67	0.79	396	329	324	294	403
1C x 185	30	1.9	1.6	1.40	26.6	2000	1.6	2.0	23.8	1800	0.0991	0.127	0.090	0.67	0.79	447	371	365	330	468
1C x 240	34	2.0	1.6	1.40	29.2	2500	1.7	2.0	26.4	2300	0.0754	0.097	0.086	0.72	0.84	515	427	420	379	553
1C x 300	34	2.1	1.6	1.56	31.9	3000	1.8	2.0	28.7	2800	0.0601	0.077	0.085	0.75	0.86	576	477	469	422	634
1C x 400	53	2.4	2.0	1.56	36.3	4100	2.0	2.2	32.5	3750	0.0470	0.060	0.085	0.75	0.88	651	537	528	473	737
1C x 500	53	2.6	2.0	1.56	39.7	5000	2.2	2.2	35.9	4600	0.0366	0.047	0.083	0.77	0.90	727	598	589	525	844
1C x 630	53	2.8	2.0	1.72	44.1	6200	2.4	2.2	39.9	5800	0.0283	0.036	0.082	0.81	0.94	806	661	651	578	961
1C x 800	53	3.1	2.0	1.88	49.4	7850	2.6	2.4	45.0	7300	0.0221	0.028	0.081	0.88	0.97	877	721	707	626	1077
1C x 1000	53	3.3	2.5	2.04	56.3	9900	2.8	2.6	51.1	9100	0.0176	0.023	0.081	0.88	1.01	935	772	751	668	1188

2 CORE, ALUMINIUM CONDUCTOR, XLPE INSULATED, ARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Min No of wires	Thickness of XLPE Insulation (nom)	Min thickness of PVC Inner Sheath	Nominal Dimension of Armour		Min Thickness of PVC Outer sheath		Approx Overall diameter of Cable with ± 2 mm tolerance		Approx weight of cable		Max D.C Resistance of Conductor at 20°C	Approx A.C Resistance of Conductor at 90°C	Approx Reactance at 50 Hz	Approx Capacitance at 50 Hz	CURRENT RATINGS		
				Strip	Wire	Strip	Wire	Strip	Wire	Strip	Wire					Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C	In Air @ 40°C
Sq.mm	No's	mm	mm	mm x mm	mm	mm	mm	mm	mm	(Kg/Km)	(Kg/Km)	Ohm/Km	Ohm/Km	Ohm/Km	uF/Km	Amps	Amps	Amps
2C x 4	1	0.7	0.3	---	1.4	---	1.24	---	14.9	---	400	7.41	9.48	0.0927	0.065	42	36	38
2C x 4	3	0.7	0.3	---	1.4	---	1.24	---	15.6	---	400	7.41	9.48	0.0927	0.065	42	36	38
2C x 6	1	0.7	0.3	---	1.4	---	1.24	---	15.9	---	450	4.61	5.90	0.0884	0.071	55	46	50
2C x 6	3	0.7	0.3	---	1.4	---	1.24	---	16.6	---	450	4.61	5.90	0.0884	0.081	55	46	50
2C x 10	1	0.7	0.3	---	1.4	---	1.24	---	17.6	---	550	3.08	3.94	0.0837	0.081	68	57	64
2C x 10	7	0.7	0.3	---	1.4	---	1.24	---	18.6	---	550	3.08	3.94	0.0837	0.088	68	57	64
2C x 16	6	0.7	0.3	---	1.4	---	1.4	---	18.8	---	600	1.91	2.44	0.0808	0.089	89	74	83
2C x 25	6	0.9	0.3	4 x 0.8	1.6	1.4	1.4	19.6	21.2	550	750	1.20	1.54	0.08	0.096	114	95	109
2C x 35	6	0.9	0.3	4 x 0.8	1.6	1.4	1.4	20.6	22.2	650	875	0.868	1.11	0.08	0.098	136	113	133
2C x 50	6	1.0	0.3	4 x 0.8	1.6	1.4	1.4	22.7	24.3	800	1050	0.641	0.820	0.078	0.10	161	134	162
2C x 70	12	1.1	0.3	4 x 0.8	1.6	1.56	1.56	25.5	27.1	1000	1250	0.443	0.567	0.077	0.11	197	164	204
2C x 95	15	1.1	0.4	4 x 0.8	2.0	1.56	1.56	28.4	30.8	1250	1700	0.320	0.410	0.074	0.11	235	196	251
2C x 120	15	1.2	0.4	4 x 0.8	2.0	1.56	1.56	30.3	32.7	1450	2000	0.253	0.324	0.072	0.11	266	222	287
2C x 150	15	1.4	0.4	4 x 0.8	2.0	1.72	1.72	33.8	36.2	1750	2300	0.206	0.264	0.072	0.11	296	248	328
2C x 185	30	1.6	0.5	4 x 0.8	2.0	1.72	1.88	37.1	39.9	2100	2700	0.164	0.210	0.072	0.11	335	281	379
2C x 240	30	1.7	0.5	4 x 0.8	2.5	1.88	2.04	40.2	43.9	2550	3500	0.125	0.160	0.072	0.11	385	324	448
2C x 300	30	1.8	0.6	4 x 0.8	2.5	2.04	2.20	45.8	49.5	3050	4200	0.100	0.128	0.071	0.12	432	364	513
2C x 400	53	2.0	0.6	4 x 0.8	2.5	2.36	2.36	50.0	53.9	3900	5100	0.0778	0.100	0.07	0.12	487	412	593

2 CORE, ALUMINIUM CONDUCTOR, XLPE INSULATED, UNARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Min No of wires	Thickness of XLPE Insulation (nom)	Min thickness of PVC Inner Sheath	Nom Thickness of PVC Outer sheath	Approx Overall diameter of Cable with ± 2 mm tolerance (mm)	Approx weight of cable Kg/Km	Max D.C Resistance of Conductor at 20°C Ohm/Km	Approx A.C Resistance of Conductor at 90°C Ohms/Km	Approx Reactance at 50 Hz Ohms/Km	Approx Capacitance at 50 Hz uF/Km	Buried Direct in the Ground @ 30°C Amps	CURRENT RATINGS	
												In Single way buried Duct @ 30°C Amps	In Air @ 40°C Amps
Sq. mm	No's	mm	mm	mm	mm	Kg/Km	Ohm/Km	Ohms/Km	Ohms/Km	uF/Km	Amps	Amps	Amps
2C x 4	1	0.7	0.3	1.8	13.1	175	7.41	9.48	0.0927	0.065	42	36	38
2C x 4	3	0.7	0.3	1.8	13.8	175	7.41	9.48	0.0927	0.065	42	36	38
2C x 6	1	0.7	0.3	1.8	14.1	200	4.61	5.90	0.0884	0.071	55	46	50
2C x 6	3	0.7	0.3	1.8	14.8	200	4.61	5.90	0.0884	0.081	55	46	50
2C x 10	1	0.7	0.3	1.8	15.8	250	3.08	3.94	0.0837	0.081	68	57	64
2C x 10	7	0.7	0.3	1.8	16.8	250	3.08	3.94	0.0837	0.088	68	57	64
2C x 16	6	0.7	0.3	1.8	16.8	260	1.91	2.44	0.0808	0.089	89	74	83
2C x 25	6	0.9	0.3	2.0	19.2	375	1.20	1.54	0.08	0.096	114	95	109
2C x 35	6	0.9	0.3	2.0	20.2	450	0.868	1.11	0.08	0.098	136	113	133
2C x 50	6	1.0	0.3	2.0	22.3	575	0.641	0.820	0.078	0.10	161	134	162
2C x 70	12	1.1	0.3	2.0	24.8	725	0.443	0.567	0.077	0.11	197	164	204
2C x 95	15	1.1	0.4	2.2	28.1	950	0.320	0.410	0.074	0.11	235	196	251
2C x 120	15	1.2	0.4	2.2	30.0	1100	0.253	0.324	0.072	0.11	266	222	287
2C x 150	15	1.4	0.4	2.2	33.2	1400	0.206	0.264	0.072	0.11	296	248	328
2C x 185	30	1.6	0.5	2.4	36.9	1650	0.164	0.210	0.072	0.11	335	281	379
2C x 240	30	1.7	0.5	2.6	40.0	2050	0.125	0.160	0.072	0.11	385	324	448
2C x 300	30	1.8	0.6	2.8	45.7	2500	0.100	0.128	0.071	0.12	432	364	513
2C x 400	53	2.0	0.6	3.0	50.2	3250	0.0778	0.100	0.07	0.12	487	412	593

2 CORE, COPPER CONDUCTOR, XLPE INSULATED, ARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 11000 V

No of Cores & Cross sectional Area	Min No of wires	Thickness of XLPE Insulation (nom)	Min thickness of PVC Inner Sheath	Nominal Dimension of Armour		Min Thickness of PVC Outer sheath		Approx Overall diameter of Cable with ± 2 mm tolerance		Approx weight of cable		Max D.C Resistance of Conductor at 20°C	Approx A.C Resistance of Conductor at 90°C	Approx Reactance at 50 Hz	Approx Capacitance at 50 Hz	CURRENT RATINGS		
				Strip	Wire	Strip	Wire	Strip	Wire	Strip	Wire					Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C	In Air @ 40°C
Sq.mm	No's	mm	mm	mm x mm	mm	mm	mm	mm	mm	(Kg/Km)	(Kg/Km)	Ohm/Km	Ohm/Km	Ohm/Km	uF/Km	Amps	Amps	Amps
2C x 4	1	0.7	0.3	---	1.4	---	1.24	---	14.9	---	450	4.61	5.90	0.0927	0.065	54	45	48
2C x 4	7	0.7	0.3	---	1.4	---	1.24	---	15.6	---	450	4.61	5.90	0.0927	0.065	54	45	48
2C x 6	1	0.7	0.3	---	1.4	---	1.24	---	15.9	---	525	3.08	3.94	0.0884	0.071	67	56	61
2C x 6	7	0.7	0.3	---	1.4	---	1.24	---	16.6	---	525	3.08	3.94	0.0884	0.071	67	56	61
2C x 10	7	0.7	0.3	---	1.4	---	1.24	---	18.6	---	675	1.83	2.34	0.0837	0.081	89	75	83
2C x 16	6	0.7	0.3	---	1.4	---	1.4	---	18.8	---	775	1.15	1.47	0.0808	0.088	115	96	108
2C x 25	6	0.9	0.3	4 x 0.8	1.6	1.4	1.4	19.6	21.2	850	1025	0.727	0.931	0.08	0.089	147	122	140
2C x 35	6	0.9	0.3	4 x 0.8	1.6	1.4	1.4	20.6	22.2	1050	1250	0.524	0.671	0.08	0.096	176	146	172
2C x 50	6	1.0	0.3	4 x 0.8	1.6	1.4	1.4	22.7	24.3	1400	1600	0.387	0.495	0.078	0.098	208	173	208
2C x 70	12	1.1	0.3	4 x 0.8	1.6	1.56	1.56	25.5	27.1	1825	2050	0.268	0.343	0.077	0.10	253	211	262
2C x 95	15	1.1	0.4	4 x 0.8	2.0	1.56	1.56	28.4	30.8	2300	2800	0.193	0.247	0.074	0.11	302	252	322
2C x 120	18	1.2	0.4	4 x 0.8	2.0	1.56	1.56	30.3	32.7	2850	3350	0.153	0.196	0.072	0.11	340	284	368
2C x 150	18	1.4	0.4	4 x 0.8	2.0	1.72	1.72	33.8	36.2	3450	4000	0.124	0.159	0.072	0.11	379	317	419
2C x 185	30	1.6	0.5	4 x 0.8	2.0	1.72	1.88	37.1	39.9	4200	4850	0.0991	0.127	0.072	0.11	425	357	482
2C x 240	34	1.7	0.5	4 x 0.8	2.5	1.88	2.04	40.2	43.9	5300	6300	0.0754	0.097	0.072	0.11	486	409	566
2C x 300	34	1.8	0.6	4 x 0.8	2.5	2.04	2.20	45.8	49.5	6450	7600	0.0601	0.077	0.071	0.12	541	456	644
2C x 400	53	2.0	0.6	4 x 0.8	2.5	2.36	2.36	50.0	53.9	8400	9650	0.0470	0.060	0.07	0.12	602	508	734

2 CORE, COPPER CONDUCTOR, XLPE INSULATED, UNARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Min No of wires	Thickness of XLPE Insulation (nom)	Min thickness of PVC Inner Sheath	Nom Thickness of PVC Outer sheath	Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable Kg/Km	Max D.C Resistance of Conductor at 20°C (kg/Km)	Approx A.C Resistance of Conductor at 90°C Ohm/Km	Approx Reactance at 50 Hz Ohm/Km	Approx Capacitance at 50 Hz uF/Km	CURRENT RATINGS		
											Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C	In Air @ 40°C
Sq. mm	No's	mm	mm	mm	mm	Kg/Km	(kg/Km)	Ohm/Km	Ohm/Km	uF/Km	Amps	Amps	Amps
2C x 4	1	0.7	0.3	1.8	13.1	225	4.61	5.90	0.0927	0.065	54	45	48
2C x 4	7	0.7	0.3	1.8	13.8	225	4.61	5.90	0.0927	0.065	54	45	48
2C x 6	1	0.7	0.3	1.8	14.1	275	3.08	3.94	0.0884	0.071	67	56	61
2C x 6	7	0.7	0.3	1.8	14.8	275	3.08	3.94	0.0884	0.071	67	56	61
2C x 10	7	0.7	0.3	1.8	16.8	375	1.83	2.34	0.0837	0.081	89	75	83
2C x 16	6	0.7	0.3	1.8	16.8	425	1.15	1.47	0.0808	0.088	115	96	108
2C x 25	6	0.9	0.3	2.0	19.2	650	0.727	0.93	0.08	0.089	147	122	140
2C x 35	6	0.9	0.3	2.0	20.2	850	0.524	0.67	0.08	0.096	176	146	172
2C x 50	6	1.0	0.3	2.0	22.3	1150	0.387	0.495	0.078	0.098	208	173	208
2C x 70	12	1.1	0.3	2.0	24.8	1500	0.268	0.343	0.077	0.10	253	211	262
2C x 95	15	1.1	0.4	2.2	28.1	2000	0.193	0.247	0.074	0.11	302	252	322
2C x 120	18	1.2	0.4	2.2	30.0	2500	0.153	0.196	0.072	0.11	340	284	368
2C x 150	18	1.4	0.4	2.2	33.2	3100	0.124	0.159	0.072	0.11	379	317	419
2C x 185	30	1.6	0.5	2.4	36.9	3750	0.0991	0.127	0.072	0.11	425	357	482
2C x 240	34	1.7	0.5	2.6	40.0	4800	0.0754	0.097	0.072	0.11	486	409	566
2C x 300	34	1.8	0.6	2.8	45.7	5950	0.0601	0.077	0.071	0.12	541	456	644
2C x 400	53	2.0	0.6	3.0	50.2	7700	0.0470	0.060	0.07	0.12	602	508	734

3 CORE, ALUMINIUM CONDUCTOR, XLPE INSULATED, ARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Min No of wires	Thickness of XLPE Insulation (nom)	Min thickness of PVC Inner Sheath	Nominal Dimension of Armour		Min Thickness of PVC Outer sheath		Approx Overall diameter of Cable with ± 2 mm tolerance		Approx weight of cable		Max D.C Resistance of Conductor at 20°C	Approx A.C Resistance of Conductor at 90°C	Approx Reactance at 50 Hz	Approx Capacitance at 50 Hz	CURRENT RATINGS		
				Strip	Wire	Strip	Wire	Strip	Wire	Strip	Wire					Buried Direct in the Ground at 30°C	In Single way buried Duct at 30°C	In Air at 40°C
Sq. mm	No's	mm	mm	mm x mm	mm	mm	mm	mm	mm	kg/Km	kg/Km	Ohm/Km	Ohm/Km	Ohm/Km	uF/Km	Amps	Amps	Amps
3C x 4	3	0.7	0.3	---	1.4	---	1.24	---	16.3	---	450	7.41	9.48	0.0927	0.22	35	30	32
3C x 6	1	0.7	0.3	---	1.4	---	1.24	---	16.6	---	500	4.61	5.90	0.0884	0.25	46	38	42
3C x 6	3	0.7	0.3	---	1.4	---	1.24	---	17.3	---	500	4.61	5.90	0.0884	0.25	46	38	42
3C x 10	1	0.7	0.3	---	1.4	---	1.24	---	18.4	---	625	3.08	3.94	0.0837	0.31	57	48	54
3C x 10	7	0.7	0.3	---	1.4	---	1.24	---	19.5	---	625	3.08	3.94	0.0837	0.31	57	48	54
3C x 16	6	0.7	0.3	4 x 0.8	1.6	1.24	1.4	17.8	19.7	530.0	725	1.91	2.44	0.0808	0.36	74	61	69
3C x 25	6	0.9	0.3	4 x 0.8	1.6	1.4	1.4	20.1	21.7	725	900	1.20	1.54	0.08	0.41	95	79	93
3C x 35	6	0.9	0.3	4 x 0.8	1.6	1.4	1.4	22.2	23.8	850	1025	0.868	1.11	0.08	0.47	114	94	114
3C x 50	6	1.0	0.3	4 x 0.8	1.6	1.4	1.56	24.6	26.5	1050	1250	0.641	0.820	0.078	0.50	134	112	138
3C x 70	12	1.1	0.4	4 x 0.8	2.0	1.56	1.56	28.9	31.3	1375	1800	0.443	0.567	0.077	0.53	164	137	175
3C x 95	15	1.1	0.4	4 x 0.8	2.0	1.56	1.56	31.1	33.5	1600	2100	0.320	0.410	0.074	0.61	197	164	216
3C x 120	15	1.2	0.4	4 x 0.8	2.0	1.56	1.72	35.7	38.4	1980	2550	0.253	0.324	0.072	0.63	223	187	249
3C x 150	15	1.4	0.5	4 x 0.8	2.0	1.72	1.88	39.2	42.0	2300	3050	0.206	0.264	0.072	0.63	249	209	284
3C x 185	30	1.6	0.5	4 x 0.8	2.5	1.88	2.04	43.3	47.0	2800	3950	0.164	0.210	0.072	0.63	282	238	329
3C x 240	30	1.7	0.6	4 x 0.8	2.5	2.04	2.20	46.3	50.0	3450	4600	0.125	0.160	0.072	0.63	327	276	392
3C x 300	30	1.8	0.6	4 x 0.8	2.5	2.20	2.36	51.6	53.3	4170	5500	0.100	0.128	0.071	0.67	369	312	452
3C x 400	53	2.0	0.7	4 x 0.8	3.15	2.52	2.68	58.4	63.3	5250	7600	0.0778	0.100	0.07	0.67	420	356	526

3 CORE, ALUMINIUM CONDUCTOR, XLPE INSULATED, UNARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Min No of wires	Thickness of XLPE Insulation (nom)	Min thickness of PVC Inner Sheath	Nom Thickness of PVC Outer sheath	Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable Kg/Km	Max D.C Resistance of Conductor at 20°C Ohm/Km	Approx A.C Resistance of Conductor at 90°C Ohms/Km	Approx Reactance at 50 Hz Ohms/Km	Approx Capacitance at 50 Hz μ F/Km	CURRENT RATINGS		
											Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C	In Air @ 40°C
Sq. mm	No's	mm	mm	mm	mm	Kg/Km	Ohm/Km	Ohms/Km	Ohms/Km	uF/Km	Amps	Amps	Amps
3C x 4	1	0.7	0.3	1.8	13.7	200	7.41	9.48	0.0927	0.22	35	30	32
3C x 4	3	0.7	0.3	1.8	14.5	200	7.41	9.48	0.0927	0.22	35	30	32
3C x 6	1	0.7	0.3	1.8	14.8	225	4.61	5.90	0.0884	0.25	46	38	42
3C x 6	3	0.7	0.3	1.8	15.5	225	4.61	5.90	0.0884	0.25	46	38	42
3C x 10	1	0.7	0.3	1.8	16.6	300	3.08	3.94	0.0837	0.31	57	48	54
3C x 10	7	0.7	0.3	1.8	17.7	300	3.08	3.94	0.0837	0.31	57	48	54
3C x 16	6	0.7	0.3	1.8	17.3	325	1.91	2.44	0.0808	0.36	74	61	69
3C x 25	6	0.9	0.3	2.0	19.7	500	1.20	1.54	0.08	0.41	95	79	93
3C x 35	6	0.9	0.3	2.0	21.8	600	0.868	1.11	0.08	0.47	114	94	114
3C x 50	6	1.0	0.3	2.0	24.2	750	0.641	0.820	0.078	0.50	134	112	138
3C x 70	12	1.1	0.4	2.2	28.6	1025	0.443	0.567	0.077	0.53	164	137	175
3C x 95	15	1.1	0.4	2.2	30.8	1250	0.320	0.410	0.074	0.61	197	164	216
3C x 120	15	1.2	0.4	2.2	35.4	1550	0.253	0.324	0.072	0.63	223	187	249
3C x 150	15	1.4	0.5	2.4	39.0	1975	0.206	0.264	0.072	0.63	249	209	284
3C x 185	30	1.6	0.5	2.6	43.1	2350	0.164	0.210	0.072	0.63	282	238	329
3C x 240	30	1.7	0.6	2.8	46.2	2950	0.125	0.160	0.072	0.63	327	276	392
3C x 300	30	1.8	0.6	3.0	51.6	3600	0.100	0.128	0.071	0.67	369	312	452
3C x 400	53	2.0	0.7	3.2	58.2	4450	0.0778	0.100	0.07	0.67	420	356	526

3 CORE, COPPER CONDUCTOR, XLPE INSULATED, ARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Min No of wires	Thickness of XLPE Insulation (nom)	Min thickness of PVC Inner Sheath	Nominal Dimension of Armour		Min Thickness of PVC Outer sheath		Approx Overall diameter of Cable with ± 2 mm tolerance		Approx weight of cable		Max D.C Resistance of Conductor at 20°C	Approx A.C Resistance of Conductor at 90°C	Approx Reactance at 50 Hz	Approx Capacitance at 50 Hz	CURRENT RATINGS		
				Strip	Wire	Strip	Wire	Strip	Wire	Strip	Wire					Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C	In Air @ 40°C
Sq.mm	No's	mm	mm	mm x mm	mm	mm	mm	mm	mm	[Kg/Km]	[Kg/Km]	Ohm/Km	Ohm/Km	Ohm/Km	uF/Km	Amps	Amps	Amps
3C x 4	1	0.7	0.3	---	1.4	---	1.24	---	15.5	---	500	4.61	5.90	0.0927	0.22	45	38	41
3C x 4	7	0.7	0.3	---	1.4	---	1.24	---	16.3	---	500	4.61	5.90	0.0927	0.22	45	38	41
3C x 6	1	0.7	0.3	---	1.4	---	1.24	---	16.6	---	625	3.08	3.94	0.0884	0.25	56	47	52
3C x 6	7	0.7	0.3	---	1.4	---	1.24	---	17.3	---	625	3.08	3.94	0.0884	0.25	56	47	52
3C x 10	7	0.7	0.3	---	1.4	---	1.24	---	19.5	---	800	1.83	2.34	0.0837	0.31	74	62	70
3C x 16	6	0.7	0.3	4 x 0.8	1.6	1.24	1.40	17.8	19.7	825	1000	1.15	1.47	0.0808	0.36	95	79	89
3C x 25	6	0.9	0.3	4 x 0.8	1.6	1.40	1.40	20.1	21.7	1150	1350	0.727	0.931	0.080	0.41	122	102	119
3C x 35	6	0.9	0.3	4 x 0.8	1.6	1.40	1.40	22.2	23.8	1450	1650	0.524	0.671	0.080	0.47	146	122	147
3C x 50	6	1.0	0.3	4 x 0.8	1.6	1.40	1.56	24.6	26.5	1900	2200	0.387	0.495	0.078	0.50	173	144	179
3C x 70	12	1.1	0.4	4 x 0.8	2.0	1.56	1.56	28.9	31.3	2550	3050	0.268	0.343	0.077	0.53	212	177	226
3C x 95	15	1.1	0.4	4 x 0.8	2.0	1.56	1.56	31.1	33.5	3250	3800	0.193	0.247	0.074	0.61	254	212	279
3C x 120	18	1.2	0.4	4 x 0.8	2.0	1.56	1.72	35.7	38.4	4000	4650	0.153	0.196	0.072	0.63	287	240	320
3C x 150	18	1.4	0.5	4 x 0.8	2.0	1.72	1.88	39.2	42.0	4950	5650	0.124	0.159	0.072	0.63	321	269	365
3C x 185	30	1.6	0.5	4 x 0.8	2.5	1.88	2.04	43.3	47.0	6000	7100	0.0991	0.127	0.072	0.63	362	304	422
3C x 240	34	1.7	0.6	4 x 0.8	2.5	2.04	2.20	46.3	50.0	7600	8850	0.0754	0.097	0.072	0.63	418	352	500
3C x 300	34	1.8	0.6	4 x 0.8	2.5	2.20	2.36	51.6	53.3	9350	10750	0.0601	0.077	0.071	0.67	469	396	574
3C x 400	53	2.0	0.7	4 x 0.8	3.15	2.52	2.68	58.4	63.3	12200	14400	0.0470	0.060	0.070	0.67	528	447	662

3 CORE, COPPER CONDUCTOR, XLPE INSULATED, UNARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Min No of wires	Thickness of XLPE Insulation (nom)	Min thickness of PVC Inner Sheath	Nom Thickness of PVC Outer sheath	Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable	Max D.C Resistance of Conductor at 20°C	Approx A.C Resistance of Conductor at 90°C	Approx Reactance at 50 Hz	Approx Capacitance at 30 Hz	CURRENT RATINGS		
											Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C	In Air @ 40°C
Sq.mm	No's	mm	mm	mm	(mm)	Kg/Km	Ohm/Km	Ohms/Km	Ohms/Km	uF/Km	Amps	Amps	Amps
3C x 4	1	0.7	0.3	1.8	13.7	275	4.61	5.90	0.0927	0.22	45	38	41
3C x 4	7	0.7	0.3	1.8	14.5	275	4.61	5.90	0.0927	0.22	45	38	41
3C x 6	1	0.7	0.3	1.8	14.8	350	3.08	3.94	0.0884	0.25	56	47	52
3C x 6	7	0.7	0.3	1.8	15.5	350	3.08	3.94	0.0884	0.25	56	47	52
3C x 10	7	0.7	0.3	1.8	17.7	475	1.83	2.34	0.0837	0.31	74	62	70
3C x 16	6	0.7	0.3	1.8	17.3	600	1.15	1.47	0.0808	0.36	95	79	89
3C x 25	6	0.9	0.3	2.0	19.7	900	0.727	0.93	0.080	0.41	122	102	119
3C x 35	6	0.9	0.3	2.0	21.8	1200	0.524	0.67	0.080	0.47	146	122	147
3C x 50	6	1.0	0.3	2.0	24.2	1600	0.387	0.495	0.078	0.50	173	144	179
3C x 70	12	1.1	0.4	2.2	28.6	2200	0.268	0.343	0.077	0.53	212	177	226
3C x 95	15	1.1	0.4	2.2	30.8	2900	0.193	0.247	0.074	0.61	254	212	279
3C x 120	18	1.2	0.4	2.2	35.4	3600	0.153	0.196	0.072	0.63	287	240	320
3C x 150	18	1.4	0.5	2.4	39.0	4500	0.124	0.159	0.072	0.63	321	269	365
3C x 185	30	1.6	0.5	2.6	43.1	5500	0.0991	0.127	0.072	0.63	362	304	422
3C x 240	34	1.7	0.6	2.8	46.2	7000	0.0754	0.097	0.072	0.63	418	352	500
3C x 300	34	1.8	0.6	3.0	51.6	8700	0.0601	0.077	0.071	0.67	469	396	574
3C x 400	53	2.0	0.7	3.2	58.2	11400	0.0470	0.060	0.070	0.67	528	447	662

3.5 CORE, ALUMINIUM CONDUCTOR, XLPE INSULATED, ARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Min No of wires (Main/Neutral)	Thickness of XLPE Insulation (nom) (Main/Neutral)	Min thickness of PVC Inner Sheath	Nominal Dimension of Armour		Min Thickness of PVC Outer sheath		Approx Overall diameter of Cable with ± 2 mm tolerance		Approx weight of cable		Max D.C Resistance of Conductor at 20°C	Approx A.C Resistance of Conductor at 90°C	Approx Reactance at 50 Hz	Approx Capacitance at 50 Hz	CURRENT RATINGS		
				Strip	Wire	Strip	Wire	Strip	Wire	Strip	Wire					Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C	In Air @ 40°C
Sq.mm	No's	mm	mm	mm x mm	mm	mm	mm	mm	mm	[Kg/Km]	[Kg/Km]	Ohm/Km	Ohm/Km	Ohm/Km	uF/Km	Amps	Amps	Amps
3.5C x 25/16	6/6	0.9/0.7	0.3	4 x 0.8	1.6	1.40	1.40	22.2	23.8	750	1000	1.20	1.54	0.080	0.41	95	79	93
3.5C x 35/16	6/6	0.9/0.7	0.3	4 x 0.8	1.6	1.40	1.40	23.9	25.5	875	1200	0.868	1.11	0.080	0.47	114	94	114
3.5C x 50/25	6/6	1.0/0.9	0.3	4 x 0.8	1.6	1.40	1.56	27.1	29.0	1110	1500	0.641	0.820	0.078	0.50	134	112	138
3.5C x 70/35	12/6	1.1/0.9	0.4	4 x 0.8	2.0	1.56	1.56	31.6	34.0	1475	2000	0.443	0.567	0.077	0.53	164	137	175
3.5C x 95/50	15/6	1.1/1.0	0.4	4 x 0.8	2.0	1.56	1.56	35.2	37.6	1825	2450	0.320	0.410	0.074	0.61	197	164	216
3.5C x 120/70	15/12	1.2/1.1	0.4	4 x 0.8	2.0	1.72	1.72	37.8	40.2	2200	2900	0.253	0.324	0.072	0.63	223	187	249
3.5C x 150/70	15/12	1.4/1.1	0.5	4 x 0.8	2.0	1.72	1.88	42.4	45.2	2625	3350	0.206	0.264	0.072	0.63	249	209	284
3.5C x 185/95	30/15	1.6/1.1	0.5	4 x 0.8	2.5	1.88	2.04	46.0	49.7	3175	4350	0.164	0.210	0.072	0.63	282	238	329
3.5C x 240/120	30/15	1.7/1.2	0.6	4 x 0.8	2.5	2.04	2.20	51.7	55.4	4000	5300	0.125	0.160	0.072	0.63	327	276	392
3.5C x 300/150	30/15	1.8/1.4	0.6	4 x 0.8	2.5	2.20	2.36	55.6	59.3	4750	6175	0.100	0.128	0.071	0.67	369	312	452
3.5C x 400/185	53/30	2.0/1.6	0.7	4 x 0.8	3.15	2.52	2.68	64.1	69.2	6000	8350	0.0778	0.100	0.070	0.67	420	356	526

3.5 CORE, ALUMINIUM CONDUCTOR, XLPE INSULATED, UNARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Min No of wires (Main/Neutral)	Thickness of XLPE Insulation (nom) (Main/Neutral)	Min thickness of PVC Inner Sheath	Nom Thickness of PVC Outer sheath	Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable	Max D.C Resistance of Conductor at 20°C	Approx A.C Resistance of Conductor at 90°C	Approx Reactance at 50 Hz	Approx Capacitance at 50 Hz	CURRENT RATINGS		
											Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C	In Air @ 40°C
Sq.mm	No's	mm	mm	mm	[mm]	Kg/Km	Ohm/Km	Ohm/Km	Ohm/Km	μ F/Km	Amps	Amps	Amps
3.5C x 25/16	6/6	0.9/0.7	0.3	2.0	21.8	550	1.20	1.54	0.080	0.41	95	79	93
3.5C x 35/16	6/6	0.9/0.7	0.3	2.0	23.5	675	0.868	1.11	0.080	0.47	114	94	114
3.5C x 50/25	6/6	1.0/0.9	0.3	2.0	26.7	875	0.641	0.820	0.078	0.50	134	112	138
3.5C x 70/35	12/6	1.1/0.9	0.4	2.2	31.3	1150	0.443	0.567	0.077	0.53	164	137	175
3.5C x 95/50	15/6	1.1/1.0	0.4	2.2	34.9	1450	0.320	0.410	0.074	0.61	197	164	216
3.5C x 120/70	15/12	1.2/1.1	0.4	2.2	37.2	1800	0.253	0.324	0.072	0.63	223	187	249
3.5C x 150/70	15/12	1.4/1.1	0.5	2.4	42.2	2200	0.206	0.264	0.072	0.63	249	209	284
3.5C x 185/95	30/15	1.6/1.1	0.5	2.6	45.8	2700	0.164	0.210	0.072	0.63	282	238	329
3.5C x 240/120	30/15	1.7/1.2	0.6	2.8	51.6	3400	0.125	0.160	0.072	0.63	327	276	392
3.5C x 300/150	30/15	1.8/1.4	0.6	3.0	55.6	4150	0.100	0.128	0.071	0.67	369	312	452
3.5C x 400/185	53/30	2.0/1.6	0.7	3.4	64.3	5400	0.0778	0.100	0.070	0.67	420	356	526

3.5 CORE, COPPER CONDUCTOR, XLPE INSULATED, ARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Min No of wires (Main/Neutral)	Thickness of XLPE Insulation (nom) (Main/Neutral)	Min thickness of PVC Inner Sheath	Nominal Dimension of Armour		Min Thickness of PVC Outer sheath		Approx Overall diameter of Cable with ± 2 mm tolerance		Approx weight of cable		Max D.C Resistance of Conductor at 20°C	Approx A.C Resistance of Conductor at 90°C	Approx Reactance at 50 Hz	Approx Capacitance at 50 Hz	CURRENT RATINGS		
				Strip	Wire	Strip	Wire	Strip	Wire	Strip	Wire					Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C	In Air @ 40°C
Sq.mm	No's	mm	mm	mm x mm	mm	mm	mm	mm	mm	[Kg/Km]	[Kg/Km]	Ohm/Km	Ohm/Km	Ohm/Km	uF/Km	Amps	Amps	Amps
3.5C x 25/16	6/6	0.9/0.7	0.3	4 x 0.8	1.6	1.40	1.40	22.2	23.8	1300	1550	0.727	0.931	0.080	0.41	122	102	119
3.5C x 35/16	6/6	0.9/0.7	0.3	4 x 0.8	1.6	1.40	1.40	23.9	25.5	1625	1850	0.524	0.671	0.080	0.47	146	122	147
3.5C x 50/25	6/6	1.0/0.9	0.3	4 x 0.8	1.6	1.40	1.56	27.1	29.0	2150	2500	0.387	0.495	0.078	0.50	173	144	179
3.5C x 70/35	12/6	1.1/0.9	0.4	4 x 0.8	2.0	1.56	1.56	31.6	34.0	2900	3450	0.268	0.343	0.077	0.53	212	177	226
3.5C x 95/50	15/6	1.1/1.0	0.4	4 x 0.8	2.0	1.56	1.56	35.2	37.6	3800	4350	0.193	0.247	0.074	0.61	254	212	279
3.5C x 120/70	18/12	1.2/1.1	0.4	4 x 0.8	2.0	1.72	1.72	37.8	40.2	4750	5400	0.153	0.196	0.072	0.63	287	240	320
3.5C x 150/70	18/12	1.4/1.1	0.5	4 x 0.8	2.0	1.72	1.88	42.4	45.2	5650	6400	0.124	0.159	0.072	0.63	321	269	365
3.5C x 185/95	30/15	1.6/1.1	0.5	4 x 0.8	2.5	1.88	2.04	46.0	49.7	6975	8200	0.0991	0.127	0.072	0.63	362	304	422
3.5C x 240/120	34/18	1.7/1.2	0.6	4 x 0.8	2.5	2.04	2.20	51.7	55.4	8800	10100	0.0754	0.097	0.072	0.63	418	352	500
3.5C x 300/150	34/18	1.8/1.4	0.6	4 x 0.8	2.5	2.20	2.36	55.6	59.3	10800	12350	0.0601	0.077	0.071	0.67	469	396	574
3.5C x 400/185	53/30	2.0/1.6	0.7	4 x 0.8	3.15	2.52	2.68	64.1	69.2	14050	16450	0.0470	0.060	0.070	0.67	528	447	662

3.5 CORE, COPPER CONDUCTOR, XLPE INSULATED, UNARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Min No of wires (Main/Neutral)	Thickness of XLPE Insulation (nom) (Main/Neutral)	Min thickness of PVC Inner Sheath	Nom Thickness of PVC Outer sheath	Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable Kg/Km	Max D.C Resistance of Conductor at 20°C Ohm/Km	Approx A.C Resistance of Conductor at 90°C Ohm/Km	Approx Reactance at 50 Hz Ohm/Km	Approx Capacitance at 50 Hz uF/Km	CURRENT RATINGS		
											Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C	In Air @ 40°C
Sq.mm	No's	mm	mm	mm	mm	Kg/Km	Ohm/Km	Ohm/Km	Ohm/Km	uF/Km	Amps	Amps	Amps
3.5C x 25/16	6/6	0.9/0.7	0.3	2.0	21.8	1050	0.727	0.931	0.080	0.41	122	102	119
3.5C x 35/16	6/6	0.9/0.7	0.3	2.0	23.5	1350	0.524	0.671	0.080	0.47	146	122	147
3.5C x 50/25	6/6	1.0/0.9	0.3	2.0	26.7	1850	0.387	0.495	0.078	0.50	173	144	179
3.5C x 70/35	12/6	1.1/0.9	0.4	2.2	31.3	2550	0.268	0.343	0.077	0.53	212	177	226
3.5C x 95/50	15/6	1.1/1.0	0.4	2.2	34.9	3550	0.193	0.247	0.074	0.61	254	212	279
3.5C x 120/70	18/12	1.2/1.1	0.4	2.2	37.2	4250	0.153	0.196	0.072	0.63	287	240	320
3.5C x 150/70	18/12	1.4/1.1	0.5	2.4	42.2	5150	0.124	0.159	0.072	0.63	321	269	365
3.5C x 185/95	30/15	1.6/1.1	0.5	2.6	45.8	6400	0.0991	0.127	0.072	0.63	362	304	422
3.5C x 240/120	34/18	1.7/1.2	0.6	2.8	51.6	8150	0.0754	0.097	0.072	0.63	418	352	500
3.5C x 300/150	34/18	1.8/1.4	0.6	3.0	55.6	10100	0.0601	0.077	0.071	0.67	469	396	574
3.5C x 400/185	53/30	2.0/1.6	0.7	3.4	64.3	13250	0.0470	0.060	0.070	0.67	528	447	662

4 CORE, ALUMINIUM CONDUCTOR, XLPE INSULATED, ARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Min No of wires	Thickness of XLPE Insulation (nom)	Min thickness of PVC Inner Sheath	Nominal Dimension of Armour		Min Thickness of PVC Outer sheath		Approx Overall diameter of Cable with ± 2 mm tolerance		Approx weight of cable		Max D.C Resistance of Conductor at 20°C	Approx A.C Resistance of Conductor at 90°C	Approx Reactance at 50 Hz	Approx Capacitance at 50 Hz	CURRENT RATINGS		
				Strip	Wire	Strip	Wire	Strip	Wire	Strip	Wire					Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C	In Air @ 40°C
Sq.mm	No's	mm	mm	mm x mm	mm	mm	mm	mm	mm	[Kg/Km]	[Kg/Km]	Ohm/Km	Ohm/Km	Ohm/Km	uF/Km	Amps	Amps	Amps
4C x 4	3	0.7	0.3	---	1.4	---	1.24	---	17.3	---	500	7.41	9.48	0.0927	0.22	35	30	32
4C x 6	1	0.7	0.3	---	1.4	---	1.24	---	17.7	---	550	4.61	5.90	0.0884	0.25	46	38	42
4C x 6	3	0.7	0.3	---	1.4	---	1.24	---	18.5	---	550	4.61	5.90	0.0884	0.25	46	38	42
4C x 10	1	0.7	0.3	---	1.4	---	1.40	---	20.1	---	725	3.08	3.94	0.0837	0.31	57	48	54
4C x 10	7	0.7	0.3	---	1.4	---	1.40	---	21.4	---	725	3.08	3.94	0.0837	0.31	57	48	54
4C x 16	6	0.7	0.3	4 x 0.8	1.6	1.4	1.40	19.6	21.2	675	850	1.91	2.44	0.0808	0.36	74	61	69
4C x 25	6	0.9	0.3	4 x 0.8	1.6	1.4	1.40	22.2	23.8	825	1050	1.20	1.54	0.080	0.41	95	79	93
4C x 35	6	0.9	0.3	4 x 0.8	1.6	1.4	1.40	24.4	26.0	1000	1300	0.868	1.11	0.080	0.47	114	94	114
4C x 50	6	1.0	0.3	4 x 0.8	1.6	1.56	1.56	27.9	29.5	1300	1550	0.641	0.820	0.078	0.50	134	112	138
4C x 70	12	1.1	0.4	4 x 0.8	2.0	1.56	1.56	31.7	34.1	1650	2200	0.443	0.567	0.077	0.53	164	137	175
4C x 95	15	1.1	0.4	4 x 0.8	2.0	1.56	1.72	35.2	37.9	2000	2650	0.320	0.410	0.074	0.61	197	164	216
4C x 120	15	1.2	0.5	4 x 0.8	2.0	1.72	1.88	39.1	41.9	2450	3200	0.253	0.324	0.072	0.63	223	187	249
4C x 150	15	1.4	0.5	4 x 0.8	2.5	1.88	2.04	42.6	46.3	2900	4100	0.206	0.264	0.072	0.63	249	209	284
4C x 185	30	1.6	0.5	4 x 0.8	2.5	2.04	2.20	47.8	51.5	3600	4800	0.164	0.210	0.072	0.63	282	238	329
4C x 240	30	1.7	0.6	4 x 0.8	2.5	2.20	2.36	53.8	57.5	4500	5900	0.125	0.160	0.072	0.63	327	276	392
4C x 300	30	1.8	0.7	4 x 0.8	3.15	2.36	2.52	59.5	64.5	5400	7600	0.100	0.128	0.071	0.67	369	312	452
4C x 400	53	2.0	0.7	4 x 0.8	3.15	2.68	2.84	67.1	72.1	6800	9200	0.0778	0.100	0.070	0.67	420	356	526

4 CORE, ALUMINIUM CONDUCTOR, XLPE INSULATED, UNARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Min No of wires	Thickness of XLPE Insulation (nom)	Min thickness of Inner Sheath	Nom Thickness of PVC Outer sheath	Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable Kg/Km	Max D.C Resistance of Conductor at 20°C Ohm/Km	Approx A.C Resistance of Conductor at 90°C Ohm/Km	Approx Reactance at 50 Hz Ohm/Km	Approx Capacitance at 50 Hz uF/Km	CURRENT RATINGS		
											Buried Direct in the Ground @ 30°C Amps	In Single way buried Duct @ 30°C Amps	In Air @ 40°C Amps
Sq.mm	No's	mm	mm	mm	mm	Kg/Km	Ohm/Km	Ohm/Km	Ohm/Km	uF/Km	Amps	Amps	Amps
4C x 4	1	0.7	0.3	1.8	14.7	225	7.41	9.48	0.0927	0.22	35	30	32
4C x 4	3	0.7	0.3	1.8	15.5	225	7.41	9.48	0.0927	0.22	35	30	32
4C x 6	1	0.7	0.3	1.8	15.9	260	4.61	5.90	0.0884	0.25	46	38	42
4C x 6	3	0.7	0.3	1.8	16.7	260	4.61	5.90	0.0884	0.25	46	38	42
4C x 10	1	0.7	0.3	1.8	17.9	350	3.08	3.94	0.0837	0.31	57	48	54
4C x 10	7	0.7	0.3	1.8	19.2	350	3.08	3.94	0.0837	0.31	57	48	54
4C x 16	6	0.7	0.3	1.8	18.8	425	1.91	2.44	0.0808	0.36	74	61	69
4C x 25	6	0.9	0.3	2.0	21.8	600	1.20	1.54	0.080	0.41	95	79	93
4C x 35	6	0.9	0.3	2.0	24.0	750	0.868	1.11	0.080	0.47	114	94	114
4C x 50	6	1.0	0.3	2.0	27.2	975	0.641	0.820	0.078	0.50	134	112	138
4C x 70	12	1.1	0.4	2.2	31.8	1300	0.443	0.567	0.077	0.53	164	137	175
4C x 95	15	1.1	0.4	2.2	34.9	1600	0.320	0.410	0.074	0.61	197	164	216
4C x 120	15	1.2	0.5	2.4	38.9	2050	0.253	0.324	0.072	0.63	223	187	249
4C x 150	15	1.4	0.5	2.6	42.4	2500	0.206	0.264	0.072	0.63	249	209	284
4C x 185	30	1.6	0.5	2.8	47.7	3050	0.164	0.210	0.072	0.63	282	238	329
4C x 240	30	1.7	0.6	3.0	53.8	3850	0.125	0.160	0.072	0.63	327	276	392
4C x 300	30	1.8	0.7	3.2	59.6	4800	0.100	0.128	0.071	0.67	369	312	452
4C x 400	53	2.0	0.7	3.6	67.3	6175	0.0778	0.100	0.07	0.67	420	356	526

4 CORE, COPPER CONDUCTOR, XLPE INSULATED, ARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Min No of wires	Thickness of XLPE Insulation (nom)	Min thickness of PVC Inner Sheath	Nominal Dimension of Armour		Min Thickness of PVC Outer sheath		Approx Overall diameter of Cable with ± 2 mm tolerance		Approx weight of cable		Max D.C Resistance of Conductor at 20°C	Approx A.C Resistance of Conductor at 90°C	Approx Reactance at 50 Hz	Approx Capacitance at 50 Hz	CURRENT RATINGS		
				Strip	Wire	Strip	Wire	Strip	Wire	Strip	Wire					Buried Direct in the Ground at 30°C	In Single way buried Duct at 30°C	In Air @ 40°C
Sq.mm	No's	mm	mm	mm x mm	mm	mm	mm	mm	mm	[Kg/Km]	[Kg/Km]	Ohm/Km	Ohm/Km	Ohm/Km	uF/Km	Amps	Amps	Amps
4C x 4	1	0.7	0.3	---	1.4	---	1.24	---	16.5	---	600	4.61	5.90	0.0927	0.22	45	38	41
4C x 4	7	0.7	0.3	---	1.4	---	1.24	---	17.3	---	600	4.61	5.90	0.0927	0.22	45	38	41
4C x 6	1	0.7	0.3	---	1.4	---	1.24	---	17.7	---	700	3.08	3.94	0.0884	0.25	56	47	52
4C x 6	7	0.7	0.3	---	1.4	---	1.24	---	18.5	---	700	3.08	3.94	0.0884	0.25	56	47	52
4C x 10	7	0.7	0.3	---	1.4	---	1.40	---	21.4	---	950	1.83	2.34	0.0837	0.31	74	62	70
4C x 16	6	0.7	0.3	4 x 0.8	1.6	1.40	1.40	19.6	21.2	1050	1200	1.15	1.47	0.0808	0.36	95	79	89
4C x 25	6	0.9	0.3	4 x 0.8	1.6	1.40	1.40	22.2	23.8	1450	1650	0.727	0.931	0.080	0.41	122	102	119
4C x 35	6	0.9	0.3	4 x 0.8	1.6	1.40	1.40	24.4	26.0	1850	2100	0.524	0.671	0.080	0.47	146	122	147
4C x 50	6	1.0	0.3	4 x 0.8	1.6	1.56	1.56	27.9	29.5	2475	2750	0.387	0.495	0.078	0.50	173	144	179
4C x 70	12	1.1	0.4	4 x 0.8	2.0	1.56	1.56	31.7	34.1	3300	3850	0.268	0.343	0.077	0.53	212	177	226
4C x 95	15	1.1	0.4	4 x 0.8	2.0	1.56	1.72	35.2	37.9	4200	4850	0.193	0.247	0.074	0.61	254	212	279
4C x 120	18	1.2	0.5	4 x 0.8	2.0	1.72	1.88	39.1	41.9	5250	6000	0.153	0.196	0.072	0.63	287	240	320
4C x 150	18	1.4	0.5	4 x 0.8	2.5	1.88	2.04	42.6	46.3	6450	7650	0.124	0.159	0.072	0.63	321	269	365
4C x 185	30	1.6	0.5	4 x 0.8	2.5	2.04	2.20	47.8	51.5	7850	9200	0.0991	0.127	0.072	0.63	362	304	422
4C x 240	34	1.7	0.6	4 x 0.8	2.5	2.20	2.36	53.8	57.5	10000	11400	0.0754	0.097	0.072	0.63	418	352	500
4C x 300	34	1.8	0.7	4 x 0.8	3.15	2.36	2.52	59.5	64.5	12350	14500	0.0601	0.077	0.071	0.67	469	396	574
4C x 400	53	2.0	0.7	4 x 0.8	3.15	2.68	2.84	67.1	72.1	16000	18500	0.0470	0.060	0.070	0.67	528	447	662

4 CORE, COPPER CONDUCTOR, XLPE INSULATED, UNARMoured POWER CABLES

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Min No of wires	Thickness of XLPE Insulation (nom)	Min thickness of PVC Inner Sheath	Nom Thickness of PVC Outer sheath	Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable Kg/Km	Max D.C Resistance of Conductor at 20°C Ohm/Km	Approx A.C Resistance of Conductor at 90°C Ohm/Km	Approx Reactance at 50 Hz Ohm/Km	Approx Capacitance at 50 Hz uF/Km	CURRENT RATINGS		
											Buried Direct in the Ground @ 30°C	In Single way buried Duct @ 30°C	In Air @ 40°C
Sq.mm	No's	mm	mm	mm	mm	Kg/Km	Ohm/Km	Ohm/Km	Ohm/Km	uF/Km	Amps	Amps	Amps
4C x 4	1	0.7	0.3	1.8	14.8	300	4.61	5.90	0.0927	0.22	45	38	41
4C x 4	7	0.7	0.3	1.8	15.5	300	4.61	5.90	0.0927	0.22	45	38	41
4C x 6	1	0.7	0.3	1.8	16.0	400	3.08	3.94	0.0884	0.25	56	47	52
4C x 6	7	0.7	0.3	1.8	16.7	400	3.08	3.94	0.0884	0.25	56	47	52
4C x 10	7	0.7	0.3	1.8	19.6	575	1.83	2.34	0.0837	0.31	74	62	70
4C x 16	6	0.7	0.3	1.8	18.8	775	1.15	1.47	0.0808	0.36	95	79	89
4C x 25	6	0.9	0.3	2.0	22.4	1150	0.727	0.93	0.080	0.41	122	102	119
4C x 35	6	0.9	0.3	2.0	24.6	1550	0.524	0.67	0.080	0.47	146	122	147
4C x 50	6	1.0	0.3	2.0	27.8	2100	0.387	0.495	0.078	0.50	173	144	179
4C x 70	12	1.1	0.4	2.2	32.0	2900	0.268	0.343	0.077	0.53	212	177	226
4C x 95	15	1.1	0.4	2.2	35.5	3800	0.193	0.247	0.074	0.61	254	212	279
4C x 120	18	1.2	0.5	2.4	39.5	4775	0.153	0.196	0.072	0.63	287	240	320
4C x 150	18	1.4	0.5	2.6	43.0	5900	0.124	0.159	0.072	0.63	321	269	365
4C x 185	30	1.6	0.5	2.8	48.3	7250	0.0991	0.127	0.072	0.63	362	304	422
4C x 240	34	1.7	0.6	3.0	54.6	9300	0.0754	0.097	0.072	0.63	418	352	500
4C x 300	34	1.8	0.7	3.2	60.6	11600	0.0601	0.077	0.071	0.67	469	396	574
4C x 400	53	2.0	0.7	3.6	68.3	15250	0.0470	0.060	0.070	0.67	528	447	662

PVC INSULATED, ARMoured CONTROL CABLES AS PER IS: 1554 (P-1)

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Thickness of PVC Insulation (nom)	Min thickness of PVC Inner Sheath	STRIP ARMoured CABLE				WIRE ARMoured CABLE				Standard Delivery/ DrumLength	Current Rating	
			Nominal size of strip	Min Thickness of PVC Outer sheath	Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable	Nominal diameter of wire	Min Thickness of PVC Outer sheath	Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable		Buried Direct in the Ground @ 30°C	In Air/Duct @ 40°C
Sq.mm	mm	mm	mm x mm	mm	mm	Kg/Km	mm	mm	mm	Kg/Km	meters	Amps	Amps
2C x 1.5	0.8	0.3	---	---	---	---	1.4	1.24	14.0	375	1000	25	20/22
3C x 1.5	0.8	0.3	---	---	---	---	1.4	1.24	14.5	400	1000	21	17/18
4C x 1.5	0.8	0.3	---	---	---	---	1.4	1.24	15.4	450	1000	21	17/18
5C x 1.5	0.8	0.3	---	---	---	---	1.4	1.24	16.3	500	1000	21	17/18
6C x 1.5	0.8	0.3	---	---	---	---	1.4	1.24	17.3	550	1000	15	13
7C x 1.5	0.8	0.3	---	---	---	---	1.4	1.24	17.3	575	1000	14	13
10C x 1.5	0.8	0.3	---	---	---	---	1.4	1.4	20.0	750	1000	13	11
12C x 1.5	0.8	0.3	4 x 0.8	1.24	19.4	675	1.6	1.4	21.4	900	1000	12	10
14C x 1.5	0.8	0.3	4 x 0.8	1.4	21.2	775	1.6	1.4	22.8	975	1000	11	10
16C x 1.5	0.8	0.3	4 x 0.8	1.4	22.1	850	1.6	1.4	23.7	1050	1000	11	9
19C x 1.5	0.8	0.3	4 x 0.8	1.4	23.1	925	1.6	1.4	24.7	1150	1000	10	9
24C x 1.5	0.8	0.3	4 x 0.8	1.4	25.1	1150	1.6	1.4	26.7	1375	1000	9	8
27C x 1.5	0.8	0.3	4 x 0.8	1.4	26.9	1200	1.6	1.4	28.5	1450	1000	9	8
30C x 1.5	0.8	0.3	4 x 0.8	1.4	27.8	1300	1.6	1.4	29.4	1550	1000	9	7
37C x 1.5	0.8	0.3	4 x 0.8	1.4	29.7	1500	1.6	1.4	31.3	1750	1000	8	7
2C x 2.5	0.9	0.3	---	---	---	---	1.4	1.24	15.2	425	1000	33	26/28
3C x 2.5	0.9	0.3	---	---	---	---	1.4	1.24	15.8	500	1000	28	23/24
4C x 2.5	0.9	0.3	---	---	---	---	1.4	1.24	16.8	550	1000	28	23/24
5C x 2.5	0.9	0.3	---	---	---	---	1.4	1.24	17.9	625	1000	28	23/24
6C x 2.5	0.9	0.3	---	---	---	---	1.4	1.24	19.1	700	1000	21	18
7C x 2.5	0.9	0.3	---	---	---	---	1.4	1.24	19.1	725	1000	20	17
10C x 2.5	0.9	0.3	4 x 0.8	1.4	21.0	850	1.6	1.4	22.6	975	1000	18	15
12C x 2.5	0.9	0.3	4 x 0.8	1.4	22.2	900	1.6	1.4	23.8	1100	1000	17	14
14C x 2.5	0.9	0.3	4 x 0.8	1.4	23.8	1000	1.6	1.4	25.4	1225	1000	16	13
16C x 2.5	0.9	0.3	4 x 0.8	1.4	24.9	1100	1.6	1.4	26.5	1325	1000	15	13
19C x 2.5	0.9	0.3	4 x 0.8	1.4	26.10	1250	1.6	1.4	27.7	1500	1000	14	12
24C x 2.5	0.9	0.3	4 x 0.8	1.4	28.4	1500	1.6	1.56	30.4	1800	1000	13	11
27C x 2.5	0.9	0.3	4 x 0.8	1.4	30.6	1625	1.6	1.56	32.6	1950	1000	12	10
30C x 2.5	0.9	0.3	4 x 0.8	1.56	32.0	1775	1.6	1.56	33.6	2050	1000	12	10
37C x 2.5	0.9	0.4	4 x 0.8	1.56	34.5	2050	2.0	1.56	36.9	2600	1000	11	9

Construction

1. Solid/Stranded annealed copper conductor & Tinned/Bare
2. General Purpose PVC-A/HR PVC-C Insulation
3. Cores laid up (filled if needed)
4. FR/FRLS/HR/General Purpose PVC ST-1 or 2 inner sheath
5. Armouring round Galvanized steel wires/strips
6. FR/FRLS/HR/General Purpose PVC ST-1 or 2 outer sheath

Max. Conductor D.C. Resistance at 20°C - Conductor Size :

1.5 sq.mm - 12.1 Ohm/Km (bare), 12.2 Ohm/Km (tinned)
 2.5 sq.mm - 7.41 Ohm/Km (bare), 7.56 Ohm/Km (tinned)

* Dimensions specified are with stranded conductor

Approx Reactance at 50 Hz

1.5 sq.mm - 0.126 Ohm/Km, 2.5 sq.mm - 0.119 Ohm/Km

Approx Capacitance at 50 Hz

1.5 sq.mm - 0.14 uF/Km, 2.5 sq.mm - 0.15 uF/Km

PVC INSULATED, UNARMoured CONTROL CABLES AS PER IS: 1554 (P-1)

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Thickness of PVC Insulation (nom)	Min thickness of PVC Inner Sheath	Nom. Thickness of PVC Outer Sheath	Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable	Standard Delivery/ Drum length	Current Rating	
							Buried Direct in the Ground @ 30°C	In Air/Duct @ 40°C
Sq.mm	mm	mm	mm	mm	Kg/Km	meters	Amps	Amps
2C x 1.5	0.8	0.3	1.8	12.2	150	1000	25	20/22
3C x 1.5	0.8	0.3	1.8	12.7	175	1000	21	17/18
4C x 1.5	0.8	0.3	1.8	13.6	200	1000	21	17/18
5C x 1.5	0.8	0.3	1.8	14.5	250	1000	21	17/18
6C x 1.5	0.8	0.3	1.8	15.5	275	1000	15	13
7C x 1.5	0.8	0.3	1.8	15.5	300	1000	14	13
10C x 1.5	0.8	0.3	1.8	17.8	400	1000	13	11
12C x 1.5	0.8	0.3	1.8	18.8	450	1000	12	10
14C x 1.5	0.8	0.3	1.8	20.2	500	1000	11	10
16C x 1.5	0.8	0.3	1.8	21.1	560	1000	11	9
19C x 1.5	0.8	0.3	2.0	22.5	660	1000	10	9
24C x 1.5	0.8	0.3	2.0	24.5	800	1000	9	8
27C x 1.5	0.8	0.3	2.0	26.3	875	1000	9	8
30C x 1.5	0.8	0.3	2.0	27.2	950	1000	9	7
37C x 1.5	0.8	0.3	2.0	29.1	1125	1000	8	7
2C x 2.5	0.9	0.3	1.8	13.4	200	1000	33	26/28
3C x 2.5	0.9	0.3	1.8	14.0	225	1000	28	23/24
4C x 2.5	0.9	0.3	1.8	15.0	275	1000	28	23/24
5C x 2.5	0.9	0.3	1.8	16.1	325	1000	28	23/24
6C x 2.5	0.9	0.3	1.8	17.3	375	1000	21	18
7C x 2.5	0.9	0.3	1.8	17.3	400	1000	20	17
10C x 2.5	0.9	0.3	1.8	20.0	550	1000	18	15
12C x 2.5	0.9	0.3	2.0	21.6	650	1000	17	14
14C x 2.5	0.9	0.3	2.0	23.2	725	1000	16	13
16C x 2.5	0.9	0.3	2.0	24.3	800	1000	15	13
19C x 2.5	0.9	0.3	2.0	25.5	900	1000	14	12
24C x 2.5	0.9	0.3	2.0	27.8	1125	1000	13	11
27C x 2.5	0.9	0.3	2.0	30.0	1225	1000	12	10
30C x 2.5	0.9	0.3	2.0	31.0	1350	1000	12	10
37C x 2.5	0.9	0.4	2.2	33.9	1600	1000	11	9

Construction

1. Solid/Stranded annealed copper conductor & Tinned/Bare
2. General Purpose PVC-A/HR PVC-C Insulation
3. Cores laid up (filled if needed)
4. FR/FRLS/HR/General Purpose PVC ST-1 or 2 inner sheath
5. FR/FRLS/HR/General Purpose PVC ST-1 or 2 outer sheath

Max. Conductor D.C Resistance at 20°C - Conductor Size :

1.5 sq.mm - 12.1 Ohm/Km (bare), 12.2 Ohm/Km (tinned)
 2.5 sq.mm - 7.41 Ohm/Km (bare), 7.56 Ohm/Km (tinned)

* Dimensions specified are with stranded conductor.

Approx Reactance at 50 Hz

1.5 sq.mm - 0.126 Ohm/Km, 2.5 sq.mm - 0.119 Ohm/Km

Approx Capacitance at 50 Hz

1.5 sq.mm - 0.14 uF/Km, 2.5 sq.mm - 0.15 uF/Km

XLPE INSULATED, ARMoured CONTROL CABLES AS PER IS: 7098 (P-1)

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Thickness of PVC Insulation (nom)	Min thickness of PVC Inner Sheath	STRIP ARMoured CABLE				WIRE ARMoured CABLE				Standard Delivery/ Drum Length	Current Rating	
			Nominal size of strip	Min Thickness of PVC Outer sheath	Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable	Nominal diameter of wire	Min Thickness of PVC Outer sheath	Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable		Buried Direct in the Ground @ 30°C	In Air/Duct @ 40°C
Sq.mm	mm	mm	mm x mm	mm	mm	Kg/Km	mm	mm	mm	Kg/Km	meters	Amps	Amps
2C x 1.5	0.7	0.3	---	---	---	---	1.4	1.24	13.6	350	1000	31	27
3C x 1.5	0.7	0.3	---	---	---	---	1.4	1.24	14.1	375	1000	26	23/22
4C x 1.5	0.7	0.3	---	---	---	---	1.4	1.24	14.9	425	1000	26	23/22
5C x 1.5	0.7	0.3	---	---	---	---	1.4	1.24	15.8	475	1000	26	23/22
6C x 1.5	0.7	0.3	---	---	---	---	1.4	1.24	16.7	525	1000	22	19
7C x 1.5	0.7	0.3	---	---	---	---	1.4	1.24	16.7	550	1000	21	18
10C x 1.5	0.7	0.3	---	---	---	---	1.4	1.24	18.9	700	1000	18	16
12C x 1.5	0.7	0.3	---	---	---	---	1.4	1.24	19.8	750	1000	17	15
14C x 1.5	0.7	0.3	---	---	---	---	1.4	1.4	21.5	825	1000	16	14
16C x 1.5	0.7	0.3	4 x 0.8	1.4	21.2	750	1.6	1.4	22.8	950	1000	16	14
19C x 1.5	0.7	0.3	4 x 0.8	1.4	22.1	850	1.6	1.4	23.7	1025	1000	15	13
24C x 1.5	0.7	0.3	4 x 0.8	1.4	24	1000	1.6	1.4	25.6	1250	1000	13	12
27C x 1.5	0.7	0.3	4 x 0.8	1.4	25.7	1050	1.6	1.4	27.3	1300	1000	13	11
30C x 1.5	0.7	0.3	4 x 0.8	1.4	26.5	1150	1.6	1.4	28.1	1400	1000	12	11
37C x 1.5	0.7	0.3	4 x 0.8	1.4	28.3	1300	1.6	1.4	29.9	1550	1000	11	10
44C x 1.5	0.7	0.3	4 x 0.8	1.4	31.4	1500	1.6	1.56	33.4	1850	1000	11	9
52C x 1.5	0.7	0.3	4 x 0.8	1.56	33.1	1700	1.6	1.56	34.7	2000	1000	10	9
61C x 1.5	0.7	0.4	4 x 0.8	1.56	34.9	1950	2.0	1.56	37.3	2450	1000	9	8
2C x 2.5	0.7	0.3	---	---	---	---	1.4	1.24	14.4	400	1000	41	36/35
3C x 2.5	0.7	0.3	---	---	---	---	1.4	1.24	15.0	425	1000	34	30/29
4C x 2.5	0.7	0.3	---	---	---	---	1.4	1.24	15.9	500	1000	34	30/29
5C x 2.5	0.7	0.3	---	---	---	---	1.4	1.24	16.9	550	1000	34	30/29
6C x 2.5	0.7	0.3	---	---	---	---	1.4	1.24	17.9	600	1000	29	26
7C x 2.5	0.7	0.3	---	---	---	---	1.4	1.24	17.9	625	1000	27	25
10C x 2.5	0.7	0.3	4 x 0.8	1.24	19.6	725	1.6	1.4	21.2	925	1000	24	21
12C x 2.5	0.7	0.3	4 x 0.8	1.4	20.6	800	1.6	1.4	22.2	1000	1000	22	20
14C x 2.5	0.7	0.3	4 x 0.8	1.4	22.0	875	1.6	1.4	23.6	1050	1000	21	19
16C x 2.5	0.7	0.3	4 x 0.8	1.4	23.1	950	1.6	1.4	24.7	1150	1000	20	18
19C x 2.5	0.7	0.3	4 x 0.8	1.4	24.1	1050	1.6	1.4	25.7	1300	1000	19	17
24C x 2.5	0.7	0.3	4 x 0.8	1.4	26.2	1300	1.6	1.4	27.8	1550	1000	17	16
27C x 2.5	0.7	0.3	4 x 0.8	1.4	28.1	1375	1.6	1.4	29.7	1650	1000	16	16
30C x 2.5	0.7	0.3	4 x 0.8	1.4	29.0	1500	1.6	1.4	30.6	1750	1000	16	14
37C x 2.5	0.7	0.3	4 x 0.8	1.4	31.1	1700	1.6	1.56	33.1	2050	1000	15	13
44C x 2.5	0.7	0.4	4 x 0.8	1.56	35.4	2050	2.0	1.56	37.8	2600	1000	14	12
52C x 2.5	0.7	0.4	4 x 0.8	1.56	36.8	2300	2.0	1.56	39.2	2850	1000	13	12
61C x 2.5	0.7	0.4	4 x 0.8	1.56	38.9	2575	2.0	1.56	41.3	3200	1000	12	11

Construction

1. Solid/Stranded annealed copper conductor & Tinned/Bare
2. Cross Linked Polyethylene (XLPE) Insulation
3. Cores laid up (filled if needed)
4. FR/FRLS/HR PVC Type ST-2 inner sheath outer sheath
5. Armouring round Galvanized steel wires/strips
6. FR/FRLS/HR PVC Type ST-2

Max. Conductor D.C Resistance at 20°C - Conductor Size :

1.5sq.mm - 12.1 Ohm/Km (bare), 12.2 Ohm/Km (tinned) 2.5sq.mm - 7.41 Ohm/Km (bare), 7.56 Ohm/Km (tinned) *Dimensions specified are with stranded conductor

Approx Reactance at 50 Hz 1.5 sq.mm - 0.107 Ohm/Km, 2.5 sq.mm - 0.0985 Ohm/Km

Approx Capacitance at 50 Hz 1.5 sq.mm - 0.15 uF/Km, 2.5 sq.mm - 0.18 uF/Km

XLPE INSULATED, UNARMoured CONTROL CABLES AS PER IS: 7098 (P-1)

FOR WORKING VOLTAGES UP TO AND INCLUDING 1100 V

No of Cores & Cross sectional Area	Thickness of PVC Insulation (nom)	Min thickness of PVC Inner Sheath	Nom. Thickness of PVC Outer Sheath	Approx Overall diameter of Cable with ± 2 mm tolerance	Approx weight of cable	Standard Delivery/ Drum length	Current Rating	
							Buried Direct in the Ground @ 30°C	In Air/Duct @ 40°C
Sq.mm	mm	mm	mm	mm	Kg/Km	meters	Amps	Amps
2C x 1.5	0.7	0.3	1.8	11.8	140	1000	31	27
3C x 1.5	0.7	0.3	1.8	12.3	160	1000	26	23/22
4C x 1.5	0.7	0.3	1.8	13.1	200	1000	26	23/22
5C x 1.5	0.7	0.3	1.8	14.0	225	1000	26	23/22
6C x 1.5	0.7	0.3	1.8	14.9	250	1000	22	19
7C x 1.5	0.7	0.3	1.8	14.9	260	1000	21	18
10C x 1.5	0.7	0.3	1.8	17.1	340	1000	18	16
12C x 1.5	0.7	0.3	1.8	18.0	400	1000	17	15
14C x 1.5	0.7	0.3	1.8	19.3	430	1000	16	14
16C x 1.5	0.7	0.3	1.8	20.2	475	1000	16	14
19C x 1.5	0.7	0.3	1.8	21.1	540	1000	15	13
24C x 1.5	0.7	0.3	2.0	23.4	665	1000	13	12
27C x 1.5	0.7	0.3	2.0	25.1	750	1000	13	11
30C x 1.5	0.7	0.3	2.0	25.9	820	1000	12	11
37C x 1.5	0.7	0.3	2.0	27.7	975	1000	11	10
44C x 1.5	0.7	0.3	2.0	30.8	1100	1000	11	9
52C x 1.5	0.7	0.3	2.0	32.1	1275	1000	10	9
61C x 1.5	0.7	0.4	2.2	34.5	1500	1000	9	8
2C x 2.5	0.7	0.3	1.8	12.6	175	1000	41	36/35
3C x 2.5	0.7	0.3	1.8	13.2	200	1000	34	30/29
4C x 2.5	0.7	0.3	1.8	14.1	250	1000	34	30/29
5C x 2.5	0.7	0.3	1.8	15.1	275	1000	34	30/29
6C x 2.5	0.7	0.3	1.8	16.1	325	1000	29	26
7C x 2.5	0.7	0.3	1.8	16.1	350	1000	27	25
10C x 2.5	0.7	0.3	1.8	18.6	475	1000	24	21
12C x 2.5	0.7	0.3	1.8	19.6	525	1000	22	20
14C x 2.5	0.7	0.3	1.8	21.0	600	1000	21	19
16C x 2.5	0.7	0.3	2.0	22.5	675	1000	20	18
19C x 2.5	0.7	0.3	2.0	23.5	775	1000	19	17
24C x 2.5	0.7	0.3	2.0	25.6	950	1000	17	16
27C x 2.5	0.7	0.3	2.0	27.5	1025	1000	16	16
30C x 2.5	0.7	0.3	2.0	28.4	1125	1000	16	14
37C x 2.5	0.7	0.3	2.0	30.5	1300	1000	15	13
44C x 2.5	0.7	0.4	2.2	34.8	1600	1000	14	12
52C x 2.5	0.7	0.4	2.2	36.2	1825	1000	13	12
61C x 2.5	0.7	0.4	2.2	38.3	2050	1000	12	11

Construction

1. Solid/Stranded annealed copper conductor & Tinned/Bare
2. Cross Linked Polyethylene (XLPE) Insulation
3. Cores laid up (filled if needed)
4. FR/FRLS/HR PVC Type ST-2 inner sheath
5. FR/FRLS/HR PVC Type ST-2 outer sheath

Max. Conductor D.C Resistance at 20°C - Conductor Size :

1.5 sq.mm - 12.1 Ohm/Km (bare), 12.2 Ohm/Km (tinned)

2.5 sq.mm - 7.41 Ohm/Km (bare), 7.56 Ohm/Km (tinned) * Dimensions specified are with

stranded conductor Approx Reactance at 50 Hz

1.5 sq.mm - 0.107 Ohm/Km, 2.5 sq.mm - 0.0985 Ohm/Km

Approx Capacitance at 50 Hz

1.5 sq.mm - 0.15 uF/Km, 2.5 sq.mm - 0.18 uF/Km

Instrumentation Cables

KEI Industries Limited manufactures a wide variety of cables suitable for process instrumentation. In the projects related to power generation & distribution, chemical & fertilizer industries and various other types of engineering industries, the process instrumentation plays a vital role in measurement, supervision and control of the process. Introduction of microprocessor based/computerised instrumentation has demanded stringent quality requirements alongwith special electrical parameters for instrumentation cables. Very low level electrical signals pass between measuring end and display units/controllers which are situated far off. These low level signals are prone to external noise pickups and heavy silenuation during transmission.

All this means that the cables to be used for instrumentation should be designed and manufactured very carefully. KEI, with its meticulous efforts in maintaining quality, stringent in process control during manufacture and the knowledge of cable designing, is proud to say that it is capable of supplying instrumentation cables meeting any Indian/ International standard or a specific requirement desired by project authority. The efforts done by KEI are regarded by acceptance of our quality by the country's prime organisations such as NTPC, PDIL, EIL, BHEL, TATA's, IOCL, L&T, ABB, KRUPP Ind, BPCL, HPCL, ESSAR, SIEMENS, Electricity Boards, Reliance, IOTL, Mukand, Honeywell, etc.

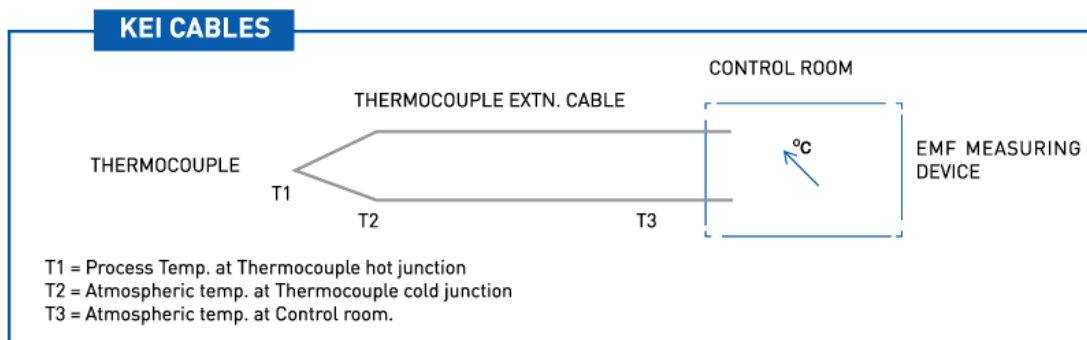
Range of Instrumentation Cables :-

Conductor	: 0.4 mm dia [0.126 sq.mm] to 2.5 sq.mm. or higher sizes of electrolytic copper wire, Tinned/untinned, solid/stranded copper conductors.
Insulation	: 70° C/85° C. Grade PVC, Polyethylene, Halogen Free FRLS Polymeric Compounds.
Elements	: Pairs/Triples/Quads, colour coded/number printed ring marked/dual colour extruded.
Shields	: Aluminium Polyester tape screen with Copper drain wire or alternately with with Copper wire braiding. Individual element or overall shielding as specified.
Element laying	: Concentric formation or unit & group formation as per applicable specification.
Amounting	: Galvanised steel wire/strip amount.
Sheathing	: PVC 70° C/90° C grade, PVC FRLS, ZHFR, CSP, PCP, EVA, etc.
Specification	: BS:5308 [1 & 2], iec-189 [1 & 2], VDE 0815, ENI 0181.00 and customers specifications.

Thermocouple Extension/Compensating Cables

These cables can also be termed as instrumentation cables, since they are used for process temperature measurement. The construction is similar to paired instrumentation cable but the conductor material is different. Thermocouples are used in processes to sense temperature and is connected to the pyrometers for indication and control. The thermocouple

and pyrometers are electrically conducted by thermocouple extension/compensating cables. The conductors used for these cables are required to have similar thermo-electric (emf) properties as that of the thermocouple used for sensing the temperature. The cables are manufactured as per IS:8784, ANSI-MC 96. 1, B.S., ENI, DIN and customers specification.



Range of Thermocouple Extension/Compensation cables :-

Extension Cables	Conductor Material	
	Positive	Negative
KX [NiCr/Nia]	Chromel	Alumel
JX [Fe/CuNi]	Iron	Constantan
EX [NiCr/CuNi]	Chromel	Constantan
TX [Cu/CuNi]	Copper	Constantan
Compensating Cables		
KX [A]/VX [NiCr/NiAl]	Copper	Constantan
SX/RX [PtRh-Pt]	Copper	Constantan

COLOUR CODES as per various standard specifications

STANDARDS REFERRED									
ANSI MC-96.1		ENI - 163.00		IS : 8784			B. S.		
	+ve	-ve	overall	+ve	-ve	overall	+ve	-ve	overall
EXTENSION CABLES									
KX	Yellow	Red	Yellow	Red	Green	Green	Brown	Blue	Red
JX	White	Red	Black	Red	Blue	Blue	Yellow	Blue	Black
TX	Blue	Red	Blue	Red	Black	Black	White	Blue	Blue
EX	Purple	Red	Purple	Red	Violet	Violet	Brown	Blue	Brown
COMPENSATING CABLES									
KX(A)/VX	—	—	—	Red	Green	Green	White	Blue	Red
SX/RX	Black	Red	Green	Red	White	White	White	Blue	Green

Rubber Cables

In keeping with the company's commitment to technological advancement, elastomer materials such as Polychloroprene (PCP), Chloro-Sulphonated Polyethylene (CSP), Nitrile Rubber / PVC blends, Ethylene Propylene Rubber (EPR), Ethylene Vinyl Acetate (EVA) and Silicone have been specially compounded to meet numerous heat oil and fire resisting requirements. In the recent years KEI has also developed special Elastomeric Fire Survival Cables for power, control and instrumentation wiring.

Elastomeric compounds for insulating and sheathing of cables are formulated to meet the requirement of IS 6380, BS 6899, IEC 60502 and other international specification.

GENERAL CONSTRUCTION (Conforming to IS 9968 Part 1 & II)

Conductor	– Annealed tinned Copper wires Solid (Class 1), Stranded (Class 2), flexible (Class 5) complying with the requirement of IS 8130
Separator Tape	– Suitable material separator tape may be applied over the conductor
Insulation	– General service elastomer compound Type IE1 of IS 6380 Heat Resisting elastomer compound Type IE2 of IS 6380 Silicone Rubber Type IE 5 of IS 6380
Core Identification	– Coloured insulation, Nos. PE tape, Coloured proofed tape, Nos. printing
Fillers	– Natural or synthetic fibres or elastomer suitable for the operating temperature and compatible with the insulating material
Sheath	– General service sheath Type SE1/SE2 of IS 6380 Heavy Duty Sheath Type SE3/SE4 of IS 6380

Working Temperature of Commonly used Elastomeric Insulating and Sheathing Materials

Material	Max. Cond. Temp. for continuous operation °C.	Max. Cond. Temp. for short circuit °C.	Min. Working Temp. °C.
Ethylene Propylene Rubber (EPR)	90	250	-50
Polychloroprene (PCP)	70	200	-40
Chlorosulphonated Polyethylene (CSP)	90	200	-35
Silicone Rubber	150/180	350	55
Chloropropylene Ethylene (CPE)	90	250	-30
Styrene Butadiene Rubber	60	200	-55
NBR PVC	90	250	-30

Rubber Cables

Current carrying capacities for Multicore Flexible Trailing cables Armoured / Unarmoured, insulated with EPR for all Voltage Grades

Nominal Cross-sectional Area Of conductor	Max. Resistance at 20°C for tinned flexible conductor(class 5)	Current Rating upto 10 kV E2(EPR)	Current Rating Above 10 kV EPR
mm ²	ohms/km	[A]	[A]
2.5	8.21	32	-
4	5.09	43	-
6	3.39	56	-
10	1.95	78	-
16	1.24	104	110
25	0.795	138	146
35	0.565	171	181
50	0.393	213	226
70	0.277	263	279
95	0.21	317	336
120	0.164	370	391
150	0.132	425	450
185	0.108	485	514

Note:

- 1) This table covers current rating of flexible trailing cable armoured / unarmoured conforming to IS:9968 I & II, IS 14494, VDE 0250 , NCB & other equivalent international specifications for flexible cables.
- 2) The rating is given above are based on ambient temp.30°C for higher temp. please refer to the following table of correction factors.

Temp.°C	EPR
25	1.05
30	1.00
35	0.93
40	0.86
45	0.80
50	0.72
55	0.63
60	0.54
70	0.31

- 3) Rating factor for 'MONOSPIRAL' reeling drum winding duty is 0.85 .
- 4) For reeling-unreeling operation rating factors are as follows :

No. of Times	1	2	3	4
Derating Factors	0.76	0.58	0.47	0.40

*Current rating for higher sizes upon request.

Rubber Cables

Elaslomenc Cables Range	Application
Cables up to 11 kV	Machine Trailing. Mining, Power
Flexible Trailing Cables	Reeling unreeling, Trailing. Festooning. Mobile Machines Cranes, Coal Handling and Conveyors
Mining Cables	FT or Pliable Armoured or Landline type as per IS 14494, NCB. SABS specs for UG, Open cast Coal or other mines and mining machines
Thermal Power Plants	For coal handling plants, flexible power and control application
Cables for Steel Plants	Flexible and high temp withstanding cables for tumace. melting shops, material handling
Wind Energy	Flexible cables for power and control for Wind Mill generator connection
Fire Survival Cables	Fire Survival for 3 Hrs or 20 Min
Ship Wiring	As per IEC specs and Naval specs DGS of DEFSTAN, NES
Offshore and Onshore	For platforms and Ring as per IEC. BS and NEK Specs
Shore Supply & Generator Cables	For charging of ship batteries and supply from mobile generators
Motor Coil Leads	Elaslomeric and Silicon as per IS. BS, or OEM Specs
High Temp Cables	Silicon insulated, glass fiber braided or unbraided
Pump Cables	For water, submersible and sewerage pumps
Cables for Railway	Coach wiring, Metro railway
Wire	HFFR Low toxic emission under fire
Panel Wiring	For flexible, high power high temp zone, polluted or moist atmospheres
Battery Cables	For High current and long life
Low Temperature installations	Suitable for subzero temp installations and operations
Misc Applications	outdoor high mast lighting site power supply, while goods, oil or chemical resistant
Type	Power and Control cables up to 61 Crores Instrumentation Pairs 30 pairs, triads, quad Wires, flat cables
Voltage Grades	11 kV, 6.6 kV, 3.3 kV, 1.1 kV, 750 V, 250 V, 110 V, 60 V
Conductor Range	0.5 to 630 sq. mm
Polymers Processed Compounds	EPR, EPDM, PCP, CSP, CPE, SILICONE, EVA HALOGEN FREE AND FIRE RESISTANT NONTXIC COMPOUNDS
Braiding Offered	ATC, GI wire braid. Synthetics or Textile Yarn. Glass Fiber
Armouring	Pliable armour or Steel / Copper Wires / Stainless steel

Conductor Data

Conductor Technical data for Single Core and Multicore cables conforming to IS: 8130 (Stranded-Class-2) Aluminium Conductor or Annealed Copper conductor, compacted circular or shaped

Nominal Size of Conductor	Minimum no of wires		Compacted		Max DC Resistance at 20°C		Approx. AC Resistance at 70°C		Approx. AC Resistance at 85°C		Approx. AC Resistance at 90°C	
	Non-compacted											
No's	COPPER	ALUMINIUM	COPPER	ALUMINIUM	Plain Copper	ALUMINIUM	PLAIN COPPER	ALUMINIUM	PLAIN COPPER	ALUMINIUM	PLAIN COPPER	ALUMINIUM
	No's	No's	No's	Ohm/Km	Ohm/Km	Ohm/Km	Ohm/Km	Ohm/Km	Ohm/Km	Ohm/Km	Ohm/Km	Ohm/Km
1.0	3	-	-	-	18.1	-	21.7	-	22.8	-	23.2	-
1.5	3	3	-	-	12.1	18.1	14.5	21.7	15.2	22.8	15.5	23.2
2.5	3	3	-	-	7.41	12.1	8.89	14.5	9.34	15.2	9.48	15.5
4	7	3	-	-	4.61	7.41	5.53	8.89	5.81	9.3	5.90	9.48
6	7	3	-	-	3.08	4.61	3.70	5.53	3.88	5.8	3.94	5.90
10	7	7	6	-	1.83	3.08	2.20	3.70	2.31	3.9	2.34	3.94
16	7	7	6	6	1.15	1.91	1.38	2.29	1.45	2.41	1.47	2.44
25	7	7	6	6	0.727	1.20	0.872	1.44	0.916	1.51	0.931	1.54
35	7	7	6	6	0.524	0.868	0.629	1.04	0.660	1.09	0.671	1.11
50	19	19	6	6	0.387	0.641	0.464	0.769	0.488	0.808	0.495	0.820
70	19	19	12	12	0.268	0.443	0.322	0.532	0.338	0.558	0.343	0.567
95	19	19	15	15	0.193	0.320	0.232	0.384	0.243	0.403	0.247	0.410
120	37	37	18	15	0.153	0.253	0.184	0.304	0.193	0.319	0.196	0.324
150	37	37	18	15	0.124	0.206	0.149	0.247	0.156	0.260	0.159	0.264
185	37	37	30	30	0.0991	0.164	0.119	0.197	0.125	0.207	0.127	0.210
240	61	37	34	30	0.0754	0.125	0.090	0.150	0.095	0.158	0.097	0.160
300	61	61	34	30	0.0601	0.100	0.072	0.120	0.076	0.126	0.077	0.128
400	61	61	53	53	0.0470	0.0778	0.056	0.093	0.059	0.098	0.060	0.100
500	61	61	53	53	0.0366	0.0605	0.044	0.073	0.046	0.076	0.047	0.077
630	91	91	53	53	0.0283	0.0469	0.034	0.056	0.036	0.059	0.036	0.060
800	91	91	53	53	0.0221	0.0367	0.027	0.044	0.028	0.046	0.028	0.047
1000	91	91	53	53	0.0176	0.0291	0.021	0.035	0.022	0.037	0.023	0.037
1200	-	-	-	-	0.0151	0.0247	-	-	-	-	0.019	0.032
1400	-	-	-	-	0.0129	0.0212	-	-	-	-	0.017	0.027
1600	-	-	-	-	0.0113	0.0186	-	-	-	-	0.014	0.024

* Shape of Conductor shall be Circular (from 1.0 sq mm upto 10 sq. mm)

* Shape of Conductor shall be Circular/Sector (from 16 sq. mm upto 1000 sq. mm)

* Shape of Conductor may be Circular/Milliken (from 1000 sq. mm and above)

SHORT CIRCUIT CURRENT RATINGS FOR XLPE/PVC CABLES

Short Circuit Rating for 1 second duration for XLPE & PVC Insulated Cables with Copper and Aluminium Conductor (Isc Current in kAmps)

Nominal Size of Conductor	XLPE Insulated (90°C)		PVC-A Insulated (70°C)		PVC-C Insulated (85°C)	
Sq.mm	COPPER	ALUMINIUM	COPPER	ALUMINIUM	COPPER	ALUMINIUM
1.0	0.143	-	0.115	-	0.104	-
1.5	0.215	-	0.173	-	0.156	-
2.5	0.358	-	0.288	-	0.260	-
4	0.572	0.376	0.46	0.304	0.416	0.276
6	0.86	0.564	0.69	0.456	0.624	0.414
10	1.43	0.94	1.15	0.760	1.04	0.690
16	2.29	1.50	1.84	1.22	1.66	1.10
25	3.58	2.35	2.88	1.90	2.60	1.73
35	5.01	3.29	4.03	2.66	3.64	2.42
50	7.15	4.70	5.75	3.80	5.20	3.45
70	10.0	6.58	8.05	5.32	7.28	4.83
95	13.6	8.93	10.9	7.22	9.88	6.56
120	17.2	11.3	13.8	9.12	12.5	8.28
150	21.5	14.1	17.3	11.4	15.6	10.4
185	26.5	17.4	21.3	14.1	19.2	12.8
240	34.3	22.6	27.6	18.2	25.0	16.6
300	42.9	28.2	34.5	22.8	31.2	20.7
400	57.2	37.6	46.0	30.4	41.6	27.6
500	71.5	47.0	57.5	38.0	52.0	34.5
630	90.1	59.2	72.5	47.9	65.5	43.5
800	114.4	75.2	92.0	60.8	83.2	55.2
1000	143.0	94.0	115.0	76.0	104.0	69.0

Rating for any other duration :

1) Max. Initial Conductor Temperature during

operation : XLPE PVC-A PVC-C
90°C 70°C 85°C

1) Max. Final Conductor Temperature during short

circuit : XLPE PVC-A PVC-C
250°C 160°C 160°C

Formula relating short Circuit Rating with
t second duration

$$I_t = \frac{I_{sc}}{\sqrt{t}}$$

Where, A = Area of cross section
Isc = Short circuit rating for 1 second
t = duration in seconds.
k = a constant depends on Conductor
& Insulation material
k = 0.094 for Al conductor & XLPE Insulation
k = 0.143 for Cu conductor & XLPE Insulation
k = 0.076 for Al conductor & PVC-A Insulation
k = 0.115 for Cu conductor & PVC-A Insulation
k = 0.069 for Al conductor & PVC-C Insulation
k = 0.104 for Cu conductor & PVC-C Insulation

Comparative Current Rating of 650/1100 Volts multicore heavy duty PVC Insulated Cable & XLPE Insulated Cables, 3, 3.5 & 4 cores Unarmoured/Armoured PVC Sheathed cables with Aluminium Conductor.

Nominal Size of Conductor	3, 3.5 & 4 Core PVC Insulated & Sheathed cables as per IS: 1554 (P-1)				3, 3.5 & 4 Core XLPE Insulated & Sheathed cables as per IS: 7098 (P-1)		
	In Ground	In Air	Approx Voltage Drop	Approx Voltage Drop	In Ground	In Air	Approx Voltage Drop
Sq.mm	Amps	Amps	V/Amps/Km	V/Amps/Km	Amps	Amps	V/Amps/Km
16	60	51	4.0	4.0	73	70	4.24
25	76	70	2.5	2.5	95	93	2.67
35	92	86	1.8	1.8	114	114	1.94
50	110	105	1.3	1.3	134	138	1.44
70	135	130	0.94	0.94	164	175	1.00
95	165	155	0.68	0.68	197	216	0.70
120	185	180	0.55	0.55	223	249	0.56
150	210	205	0.46	0.46	249	284	0.48
185	235	240	0.37	0.37	282	329	0.40
240	275	280	0.30	0.30	327	392	0.30
300	305	315	0.26	0.26	369	452	0.26
400	335	375	0.22	0.22	420	526	0.21

Comparative Current Rating Of 650/1100 Volts Multicore Heavy Duty PVC Insulated Cable & XLPE Insulated Cables, 3, 3.5 & 4 Cores Unarmoured/Armoured PVC Sheathed Cables with Aluminium Conductor

Nominal Size of cable	3, 3.5 & 4 Core PVC Insulated & Sheathed cables as per IS: 1554 (P-1)			3, 3.5 & 4 Core XLPE Insulated & Sheathed cables as per IS: 7098 (P-1)		
	In Ground	In Air	Approx Voltage Drop V/Amps/Km	In Ground	In Air	Approx Voltage Drop V/Amps/Km
sq. mm	Amp	Amp		Amp	Amp	
16	60	51	4.0	73	70	4.24
25	76	70	2.5	95	93	2.67
35	92	86	1.8	114	114	1.94
50	110	105	1.3	134	138	1.44
70	135	130	0.94	164	175	1.00
95	165	155	0.68	197	216	0.70
120	185	180	0.55	223	249	0.56
150	210	205	0.46	249	284	0.48
185	235	240	0.37	282	329	0.40
240	275	280	0.30	327	392	0.30
300	305	315	0.26	369	452	0.26
400	335	375	0.22	420	526	0.21





Handling & Storage

Handling (Unloading at Site)

On receipt of the cable drum, visual inspection of the drum should be made. While unloading the drums from the lorry/trailer, a crane or suitable derrick system with chain pulley arrangement should be used and the drums carefully lifted and deposited on the ground. When lifting the drums with a crane, it is recommended that the lagging should be kept in place to prevent the flanges from crushing on to the cable. If the crane is not available, a ramp should be prepared with approximate inclination of 1:3 or 1:4. The cable drum should be rolled over the ramp by means of ropes and winches. Under no circumstances should the drums be dropped on the ground as the shock may cause serious damage to the inner layer of the cables. Cables should not be dragged along the earth surface.

Cable ends should always be sealed by means of suitable end sealing materials to prevent miniaturization of cores and armour. Drums should be rolled in the direction of arrows marked on the drums.

Storage

The site chosen for the storage for the cable drums should be dry and covered to prevent exposure to climatic conditions and wear & tear of wooden drum. It should be preferably on a concrete / consolidated surface which will not cause the drum to sink and thus lead to flange and extremely difficult in moving the drums. The drum should be stored in such a manner as to leave sufficient space between them for air circulation. It is desirable for the drums to stand on battens placed directly under flanges. In no case shall the drums be stored flat i.e. with flanges horizontal.

Minimum Permissible Bending Radius

While installing the cables, the following minimum bending radius should be observed in order so that the cables, especially insulation, may not undergo damage. Whenever possible larger bending radius should be used.

VOLTAGE RATING	PVC & XLPE Cables	
	Single Core	Multicore
kV		
Upto 1.1	15D	12D
Above 1.1 to 11	15D	15D
Above 11 kV	20D	15D

Where D is outer diameter of cable

Cable Selection Guide

Materials Comparison Chart

KEI offer a wide range of materials for the purpose of insulation and sheathing. KEI is putting their effort to design the cables by carefully balancing the properties of selected materials in combination with a view to meet the specific environmental and installation conditions.

Any material does not possess universal properties which is suitable for all conditions. This will be evident from the comparison chart.

Although this chart does not provide the detailed information of all the materials and combinations of them with every pertinent characteristics, it serves as a guideline of information which a cable specialist requires to ensure most appropriate design to meet specific needs.

Please do consult our experts from the Technical Services Department of KEI Industries Limited, Cable Division.

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KEI WIRES & CABLES

Notes

[illegible]

Notes

[illegible]



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