



Thermo Cables is a recognized and preferred brand across various industries including Oil & Gas, Railways, Navy, Defence, Renewable Energy,
Nuclear Power, Process Industries, Power etc, exporting 50% of products.

Established in 1990, it is a leading manufacturer of various types of speciality cables. Thermo Cables is a part of Thermo Group – a multi-product & multi-service organization with other group companies:
Thermopads: A specialist in Commercial, Domestic and Industrial Heating
Thermosystems: An EPC company in the field of Fuel Oil Handling Systems,
Fire Detection Protection Systems etc.



### **Major Approvals**

ADNOC - OFFSHORE ADNOC - ONSHORE **ALBA AP GENCO** 

**AP TRANSCO** 

**AVANT GARDE** 

BDL, BEL

BHEL, BLW

**BOROUGE** 

**BPCL** 

CLW, CMRL, CSL

DLW. DMW

DLRL, DMRL

**DMRC** 

**DESEIN LTD** 

DGMS. DVC

DRDO, DRDL

**EGA** 

**ENGINEERS INDIA LTD** 

FICHTNER CONSULTING

**GRSE, GSPC** 

**GOA SHIPYARD** 

HINDUSTAN SHIPYARD

HPCL, HAL, HMRL

**IOCL, ICF, ISRO** 

JACOB'S H & G

KNPC, KUWAIT

**KOC, KUWAIT** 

L & T

MATERIAL ORGANISATION - KARWAR MATERIAL ORGANISATION - MUMBAI **MATERIAL ORGANISATION - VIZAG** 

MECON, MCF

MN DASTUR & CO.

MAZGOAN DOCK LIMITED

**MUMBAI PORT TRUST** 

NPCIL, NSTL, NTPC

ONGC

PDIL, PGCIL

PDO OMAN, PETRONAS

**QATAR PETROLEUM** 

**RCF** 

SAIL

TATA CONSULTING ENGINEERS **TECNIMONT ICB LTD** TOYO ENGINEERING INDIA LTD THYSSENKRUPP

Stringent quality requirements, global standards of precision and increasingly demanding customers are the order of the day, Thermo Cables, sensitive to this reality, designs, manufactures and supplies a wide range of cables to satisfy customers' specifications and requirements.

### **Product Range**

- Instrumentation Cables
- LV Power & Control Cables
- Thermocouple Cables
- **▼** Fire Resistant Cables
- Railway Cables
- Naval Application Cables
- Marine / Shipboard Cables
- Pressure Tight (PT) Cables
- Renewable Energy Cables
- High Temperature Cables
- Material Handling Cables
- Foundation Fieldbus Cables
- ▼ Special Application (LFH) Cables
- Co-Axial Cables (RG Series)
- ▼ VFD Cables
- Cathodic Protection Cables

### Why Us

- Leading & reputed manufacturer of Specialty Cables
- One stop solution for all Low Voltage
- Serving satisfied customers since 30 years across 60+ countries
- In-house wire drawing, compounding, Electron beaming and testing facilities
- Quick response time and offer submission in less than 24 hours

### **Standards**

 Cables designed and manufactured conforming to various National and International Standards: ANSI MC 96.1, BS-6346, BS-5467, BS-7919, BS-7629, BS-6387, BS-7846, BS-5308-I & II, BSEN 50288-7, DEF-02 526, DEF-02 527, EED 50-12, 50-13, IEC-60502-I, IEC-60189-I & II, IEC-60228, IEC-60092 350 353 376, IEC-60584-I & III, IEC-60331, IS-8784, IS-613, IS-694, IS-1554-I, IS-7098-I, IS-9968-I, JSS-51034, JSS-51038, MIL-C-17, MIL-DTL-22759/86A, MIL-DTL-22759/87A, MIL-DTL-27500H, MIL-DTL-24640C, MIL-DTL-24643C, UL-1581, UL-758, VDE-0815, VDE-0816, VG-95218 60-66 etc.

### Quality & Reliability

- An ISO 9001, 2015 certified company with proven track record of delivering quality products
- NABL accredited full-fledged in-house testing laboratory
- Environment, Occupational Health and Safety Systems adhering to ISO 14001-2015, 45001-2018
- 15% of power consumption sourced through in-house generated renewable energy

### Valuable Assets

- Over 3,00,000 sq ft of infrastructure facilities with latest technology
- ◆ 1000+ dedicated & high performing workforce
- Experienced & professional leadership team
- Offers technical support in cable selection through SAP





























### **Instrumentation Cables**

Instrumentation Cables are specially designed to transmit signals without any external interference. They are used in Data Acquisition Systems, Connections to Instruments, Computer Networking, PA Systems, Digital / Analog Control / Measuring & Communication Systems, Data Communication, Sensors, Transducers etc.

**Construction** : Cores, pairs, triads or quads

**Voltage Grade** : Up to 1100 V

**Conductor** : Electrolytic Grade Copper Bare / Tinned / Nickel Plated / Silver Plated

Solid / Stranded / Flexible Conductors

**Range** : 0.5 / 0.75 / 1.0 / 1.5 / 2.5 Sq mm up to 100 pair

**Primary Insulation**: General Purpose PVC / Heat Resistant PVC / PE / XLPE / PTFE / FEP / PFA /

EPR / Silicone Rubber / Fibre Glass

**Screening**: Individual and / or overall with following options -

Aluminum Mylar / Copper Tape with Tinned Copper Drain WireBraided with Bare or Tinned or Nickel Plated or Silver Plated Copper

Inner Sheath : PVC / HRPVC / FRPVC / FRLS PVC / ZHFR / LSF

Armouring : GI Round Wire / Flat Strip or GI / SS Wire Braiding

Outer Sheath : PVC / HRPVC / FRPVC / FRLS PVC / ZHFR / LSF

**Rip Cord** : For easy removal of sheath

**Standards** : BS-5308 Part-1 & 2, BS-7655, IEC-189 (1 & 2), VDE-0815 & 0816 and

BS-EN 50288-7, IEC-60332-1, IEC-60332-3-22, 23, 24

**Additional Features**: Communication pairs, Bi-colour extrusion, Band marking

**Optional Bedding** : Aluminum Tape + HDPE + Polyamide Sheath for Alternate Lead Sheath Cables

Note: We also offer Data Communication and Low Capacitance Cables

#### **Technical Data**

Conductor Resistance	Conductor Size mm <sup>2</sup>	0.5	0.75	1.0	1.5	2.5
at 20° C Ohms/Km	Maximum Resistance (Plain Copper, Class-2 Conductor)	39.0	26.0	19.5	13.3	7.98
Capacitance nf/Km	Between Conductors			250 for Poly		
Inductance mH/Km				<1.0		
L/R Ratio	Conductor Size mm <sup>2</sup>	0.5	0.75	1.0	1.5	2.5
μH/Ohm	L/R	< 25	< 25	< 25	< 40	< 60
Insulation Resistance	PVC		Мс	ore than	100	
at 20° C MOhm-Km	PE/XLPE	More than 5000				
Electrostatic noise rejection ratio		More than 76.0 db				



### LV Power & Control Cables

Construction : Single Core / Multi Core
Voltage Grade : Upto 1800 / 3300 V AC

**Conductor** : Aluminum / Copper, Solid / Standard / Flexible Conductor

**Range** : Single Core up to 1000 Sq mm

Multi Core up to 400 Sq mm

Max 61 Cores of 1.5, 2.5, 4.0, & 6.0 Sq mm

**Primary Insulation**: General Purpose PVC / Heat Resistant PVC / LDPE / XLPE / EPR / HEPR

Inner Sheath : PVC / HRPVC / FRPVC / FRLS PVC / ZHFR / LSF

**Armouring**: GI Round Wire / Flat Strip or GI / SS Wire Braiding Non-Magnetic

Armour / Braiding for Single Core

Outer Sheath : General purpose PVC / HRPVC / FRLS PVC / ZHFR / LSF

**Standards** : IS-694, IS-1554 (Part-I), IS-7098 (Part-I), IEC-60502-1 & BS-6346,

BS-5467, IEC-60227, BS-6004, IEC-60332-1, IEC-60332-3-22, 23, 24

**Optional Bedding** : Aluminium Tape + HDPE + Polyamide Sheath for an alternate Lead

Sheath Cables

#### **Core Identification**

Cores shall be identified by different colours of PVC insulation. Following colour scheme shall be adopted

1 Core : Black or any Single colour

2 Core : Red & Black
3 Core : Red, Yellow & Blue
4 Core : Red, Yellow, Blue & Black
5 Core : Red, Yellow, Blue, Black & Grey

6 Cores and above : Two adjacent Cores (counting and direction Core) in each layer, Blue &

Yellow, remaining Cores Grey

In addition to these, combinations from the following colours can also be offered -

Red, Black, Blue, Brown, Green, Grey, Orange, Violet, White, Yellow.

Alternately, any single colour insulation on all Cores with number printing can also be provided.

#### **Designation Code**

Y -- PVC insulation

W -- Steel round wire armour

F -- Steel strip armour

WW -- Steel double round wire armour

FF -- Steel double strip armour

Y -- PVC outer sheath

Wa -- Non-magnetic round wire armour

A -- Aluminium conductor

No Abbreviations used when the conductor material is Copper

### **Thermocouple Extension/Compensating Cables**

**Construction** : Single or Multiple Pairs

**Voltage Grade** : Up to 1100 V

Cable Code : Kx, Kx (A), Tx, Jx, Ex, Sx / Rx, Bx, Nx, Ux, Wx

Range : 16 AWG / 18 AWG / 20 AWG up to 48 Pair

**Primary Insulation**: General purpose PVC / Heat Resistant PVC / PE / XLPE / PTFE / FEP / PFA /

Silicone Rubber / Fibre Glass

**Screening**: Individual and/or overall with following options –

Aluminum Mylar / Copper Tape with Tinned Copper Drain WireBraided with Bare or Tinned or Nickel Plated or Silver Plated Copper

Inner Sheath : PVC / HRPVC / FRPVC / FRLS PVC / ZHFR / LSF / PTFE / PFA / FEP / Fibre Glass

**Armouring**: GI Round Wire / Flat Strip or Wire Braiding

Outer Sheath : PVC / HRPVC / FRPVC / FRLSPVC / ZHFR / LSF/ PTFE / Fibre Glass / PFA / FEP

**Rip Cord** : For easy removal of sheath

**Standards** : ANSI: MC-96.1, IS-8784, DIN, BS & IEC-584-3, IEC-60332-1,

IEC-60332-3-22, 23, 24

Note:- Other conductor sizes and insulation materials on request

#### **Technical Data**

CABLE	CABLE CODE		Кх	Kx (A)	Tx	Jx	Ex	Sx / Rx	
CABLE	CABLE TYPE		EXT.	COMP	EXT.	EXT.	EXT.	COMP	
	+Ve leg		Chromel	Copper	Copper	Iron	Chromel	Copper	
Conductor		-V	'e leg	Alumel	Constantan	Constantan	Constantan	Constantan	Copper Alloy
Suitable for Thermocoup	ole Ty	pe		Kx	Kx	Tx	Jx	Ex	Sx / Rx
0	) l-			Chromel	Copper	Copper	Iron	Chromel	Platinum 10/13%
Conductor C	omb	ination		Alumel	Alumel	Constantan	Constantan	Constantan	Rhodium Platinum
Temperature of measuring			°C	0 to +1100	☆	-185 to +300	+20 to +700	0 to +800	0 to + 1550 0 to + 1600
	Applicable standards for ouput of Thermocouple conductors		BS-4937 part 4 ANSI/MC 96.1 type K DIN 43710 NF C 42- 321 JISC 1602	¥	BS-4937 part 5 ANSI/MC 96.1 type T NF C 42- 321 JISC 1602	BS-4937 part 3 ANSI/MC 96.1 type J NF C 42- 321 JISC 1602	BS-4937 part 6 ANSI/MC 96.1 type E NF C 42- 321 JISC 1602	BS-4937 part 1 ANSI/MC 96.1 type S, R, NF C 42- 321 JISC 1602	
(D		1	BS						
DNIOC			ANSI						
COLOUR CODING			DIN						
OLOU			NF						
ŏ			JISC						
Approximat	e gei	nerated 1	00°C	42	☆	46	46	68	8/8
EMF chang mV/C at	e pei		00°C	43	☆	_	56	81	9/10

NOTES: ☆ Used for interconnecting Type 'K' thermocouples and instrumentation as an alternative to type 'K' material. Only used where the interconnection temperature is in the range 0° C to + 80° C
We can also offer NX, UX and WX Cables ® Kx (A) - also known as Vx



### **Fire Resistant Cables**

Finds application where electrical integrity of the cable has to remain intact for at least three hours, so as to activate and maintain crucial functions such as fire fighting, public announcements, smoke extraction systems, sprinklers, emergency lighting, evacuation path lighting systems etc.

The areas for Fire Resistant cable applications include places where large number of people congregate for short or limited period of time such as shopping malls, cinema theaters, educational institutions, airport terminals, mass transit systems (metro rail networks), high rise office buildings etc. FR cables also find use in power generation facilities, petrochemical complexes, nuclear power facilities, mines etc. for phased shut down of the plant and to keep critical functions like communication, rescue and evacuation systems functional during a fire.

**Construction** : Single & Multi Cores / Pairs / Traids

**Voltage Grade** : 600 / 1100 V AC

**Conductor** : - Solid or Stranded Annealed Bare or Tinned Copper Conductor /

- Stranded Aluminium Conductor

**Fire Barrier** : Glass Mica Tape

**Insulation** : XLPE or EPR or Silicone Rubber

**Screening**: Individual and/or overall with following options -

Aluminum Mylar / Copper Tape with Tinned Copper Drain Wire
 Braided with Bare or Tinned or Nickel Plated or Silver Plated Copper

Inner Sheath : LSOH / ZHFR / SHF1 / SHF2 or equivalent

**Armouring** : Galvanized Steel Wire Helical Armour / Steel Wire Braid

Outer Sheath : LSOH / ZHFR / SHF1 / SHF2 or equivalent

**Standards**: BS-7846, BS-7629, BS-8434 or equivalent with fire test confirming

resistance to BS-6387 category CWZ 'or' IEC-60331-21

 Fire Resistance cable type tested at BRE Global (UK) for BS-6387 CWZ category







### **Railway Cables**

# Thin Walled Electron Beam Irradiated Flexible Elastomeric Cables With Copper Conductors

Electron beam irradiated thin walled flexible cables with copper conductor, limited fire hazard, minimum flame spread, low smoke emission and limited toxic fume emission properties.

**Specification**: ELRS / SPEC / ELC / 0019, Rev.4

**Temperature Range** : - 40° C to 120° C

**Conductor** : Electrolytic flexible annealed tinned copper (Class 5)

**Application** : For use in power, auxiliary as well as control circuits of conventional tap changer electric

locomotives AC / DC EMU, BG AC EMU & MEMU / coaching stock

Cable Type: Singe Core Cable (single layer)Size: 1.5 Sq mm to 150 Sq mm

Voltage Grade : Up to 750 V Insulation : EBXL EVA

Cable Type : Singe Core Cable (dual layer)
Size : 1.5 Sq mm to 300 Sq mm
Voltage Grade : Above 750 V & up to 1.8 / 3.0 KV

Insulation : EBXL EPDM
Sheath : EBXL EVA

Colours : Red / Yellow / Blue / Black / Grey / GNYE / Chocolate / White as per customer requirement

**Cable Type** : Multi Core Cables 19 Core 2.5 Sq mm and 19 Core 4.0 Sq mm

Voltage Grade : Above 750 V & up to 1.8 / 3.0 KV

Insulation : EBXL EPDM Sheath : EBXL EVA

# Thin Walled Electron Beam Irradiated Flexible Elastomeric Cables With Copper Conductors as per EDTS 132, REV-C

LFH type cables i.e. minimum flame spread, low smoke and toxic fume emission.

**Data Sheet-1** (Single Core Cable) **Voltage Grade:** 1800 V / 3000 V

**Conductor** : Circular annealed tinned copper (Class 5)

Insulation : EBXL EPDM
Sheath : EBXL EVA (black)

Data Sheet-2 (Single Core Cable)

Voltage Grade : 600 V / 1000 V

**Conductor** : Circular annealed tinned copper (Class 5)

**Insulation**: EBXL EVA (grey)

Data Sheet-3 (Multi Core Unscreened Cable)

Voltage Grade: 600 V /1000 V

Conductor : Circular annealed tinned copper (Class 5)
Insulation : EBXL EPDM (white, brown, black

& green / yellow coloured cores)

**Sheath**: EBXL EVA (black)

**Data Sheet-4** (Multi Core Screened Cable)

Voltage Grade: 600 V

Conductor : Circular annealed tinned copper (Class 5)
Insulation : EBXL EPDM (white, brown, black

& green / yellow coloured cores)

EMC Screen : Annealed tinned copper Sheath : EBXL EVA (black)

Data Sheet-5 (UIC Cable)

**ITEM 1-**4Q x 1 Sq mm + 1P x 0.75 Sq mm (18 core cable) **ITEM 2-**5Q x 1 Sq mm + 1P x 0.75 Sq mm (22 core cable)

Voltage Grade :300 / 300 V

 Conductor
 : Circular annealed tinned copper (Class 5)

 Insulation
 : EBXL EPDM (white numbered cores)

 EMC Screen
 : Annealed tinned copper

 Sheath
 : EBXL EVA (black)

Data Sheet-6 (Multi Core Unscreened Cable)

Voltage Grade :600 V / 1000 V

Conductor : Circular annealed tinned copper (Class 5) : EBXL EPDM (white numbered cores)

**Sheath**: EBXL EVA (black)

Temperature Range: -40° C to 120° C

**Application**: For power, signalling & control

application in coaches



### **Railway Cables**

#### Single Core Cables for Electric Locomotives Types WAG-9, WAG-9H, WAP-5 & WAP-7

Limited fire hazard electrical insulation cable, dual wall insulation, low smoke halogen free, flame retardant, excellent resistance to high and low temperature, oil, ozone, weathering and abrasion flexible easy strippable.

**Specification**: CLW / ES / 3 / 0458 Alt. E

Temperature Range: -40° C to 120° C

**Application**: For the purpose of use in power, control, sensor and driver circuits for protected installation,

inside and outside railway rolling stock to connect fixed and moving parts.

Data Sheet-1

Cable Type: Single Core CableSize: 1.5 Sq mm to 150 Sq mm

**Voltage Grade** : 4 GKW (1.8 KV)

**Conductor** : Circular flexible annealed tinned copper (Class 5)

Insulation : EBXL EPDM Sheath : EBXL EVA

Data Sheet-2

Cable Type: Single Core CableSize: 10 Sq mm to 150 Sq mm

**Voltage Grade** : 9 GKW (4.0 KV)

**Conductor** : Circular flexible annealed tinned copper (Class 5)

Insulation : EBXL EPDM
Sheath : EBXL EVA

**Data Sheet-3** 

**Cable Type** : Single Core wire red / GY colour 0.5 Sq mm

 $\textbf{Voltage Grade} \qquad : \ 300 \ \text{V} \ / \ 500 \ \text{V}$ 

**Conductor** : Stranded tin plated copper

**Insulation :** EBXL EVA

#### Multi Core Cables for Electric Locomotives Types WAG-9, WAG-9H, WAP-5 & WAP-7

Limited fire hazard electrical insulation cable, dual wall insulation, low smoke halogen free, flame retardant, excellent resistance to high and low temperature, oil, ozone, weathering and abrasion flexible easy strippable.

**Specification**: CLW / ES / 3 / 0459 Alt. C

Temperature Range :  $-40^{\circ}$  C to  $120^{\circ}$  C

**Application**: For the purpose of use in control, sensor and driver circuits for protected installation, inside

and outside railway rolling stock to connect fixed and moving parts.

Data Sheet-1

**Cable Type** : Multi Core Screened & Unscreened Cables

**Voltage Grade** : 300 V / 300 V (0.5 Sq mm)

**Conductor** : Circular flexible annealed tinned copper (Class 5)

**Insulation**: EBXL EPDM

**EMC Screen** : Annealed tinned copper

Sheath : EBXL EVA

Data Sheet-2

**Cable Type** : Multi Core Screened & Unscreened Cables

**Voltage Grade** : 600 V / 1000 V (1.0 Sq mm)

**Conductor** : Circular flexible annealed tinned copper (Class 5)

**Insulation**: EBXL EPDM

**EMC Screen** : Annealed tinned copper

Sheath : EBXL EVA



### **Railway Cables**

#### Control Wires for Diesel Electric Locomotives including AWG size # 3

Thermosetting, flame retardant, oil grease resistant compound also resistant to moisture, caustic cleaning solutions, high ambient conditions, electrical overload conditions, abrasion, cut-through, compression and crush force and low smoke and acid gas generation properties.

Specification:EDPS 179Temperature Range:- 65° C to 125° CCable Type:Single Core WiresVoltage Grade:600 V to 2100 V

Conductor: Annealed tinned copper (Class 5)Insulation: Thermosetting flame retardant compound

Application : For use within the electrical control system of diesel electric locomotives and other heavy

duty industrial equipment

#### Power Cables for Diesel Electric Locomotives including AWG size # 1 & larger

Thermosetting, flame retardant, oil grease resistant compound that is also resistant to moisture, caustic cleaning solutions, high ambient conditions, electrical overload conditions, abrasion, cut-through, compression and crush force and low smoke and acid gas generation.

Specification : EDPS 304

Temperature Range : -70° C to 130° C

Cable Type : Single Core Review

**Cable Type** : Single Core Power Cables

**Voltage Grade** : 600 V to 2100 V

Conductor: Annealed tinned copper (Class 5)Insulation: Thermosetting flame retardant compound

**Application**: For use within the power distribution of diesel electric locomotives and other heavy duty

industrial equipment with variable duty cycle

#### **Traction / Rolling Stock / Metro Application as per BSEN Specification**

Cable Type	Specification	Voltage Grade
Railway rolling stock high temperature power cables having special fire performance	BSEN-50382-1 BSEN-50382-2	<ul> <li>1.8 / 3 KV unscreened, unsheathed with or without textile braid (1.5 mm² to 400 mm²)</li> <li>1.8 / 3 KV unscreened, sheathed (1.5 mm² to 400 mm²)</li> <li>3.6 / 6 KV unscreened, unsheathed with or without textile braid (2.5 mm² to 400 mm²)</li> <li>3.6 / 6 KV unscreened, sheathed (2.5 mm² to 400 mm²)</li> </ul>
Railway rolling stock power and control cables having special fire performance	BSEN-50264-1 BSEN-50264-3-1 BSEN-50264-3-2	<ul> <li>0.6 / 1 KV unscreened &amp; unsheathed (1 Sq mm to 400 Sq mm)</li> <li>1.8 / 3 KV unscreened &amp; unsheathed (1.5 Sq mm to 400 Sq mm)</li> <li>1.8 / 3 KV unscreened &amp; sheathed (1.5 Sq mm to 400 Sq mm)</li> <li>3.6 / 6 KV unscreened &amp; sheathed (2.5 Sq mm to 400 Sq mm)</li> </ul>
Railway rolling stock cables having special fire performance thin wall	BSEN-50306-1 BSEN-50306-2 BSEN-50306-3 BSEN-50306-4	<ul> <li>EN 50306-4 specifies requirements for and constructions and dimensions of multi core &amp; multi pairs cables rated 300 V to earth of the following type</li> <li>Unscreened, sheathed for either exposed or protected wiring (Size: 0.5 to 2.5 Sq mm &amp; no of cores: 2 to 48)</li> <li>Screened, sheathed for either exposed or protected wiring (Size: 0.5 to 2.5 Sq mm &amp; no of cores: 2 to 8)</li> <li>Screened, sheathed for either exposed or protected wiring (Size: 0.5 to 2.5 Sq mm &amp; no of cores: 2 to 7)</li> </ul>



### **Naval Application Cables**

### **On Board Indian Naval Ships and Crafts Cables**

For use on onboard Surface Ships, Submarines and Crafts for Power, Lighting, Control, Communication and Instrumentation. Used in Fuel and Lubrication Oils, Hydraulic Fluids and Water Surfaces.

**Standards**: EED-50-12-Thin Walled, Insulated, Electron Beam Cross Linked

Irradiated Electric Cables

EED-50-13-Fire Survival, High Temperature Zone, Fire Retardant

Halogen Free Sheathed Electron Beam Cross Linked

**Construction**: Single Core, Multi Core, Multi Pair & Triad Cables, Unscreened / Individually

Screened or Collectively Screened

**Voltage Grade** : 440 V AC, 600 V AC and 1800 V AC (for Single Core Cables)

**Conductor**: Circular Electroplated, Annealed Tinned Flexible (Class V) Copper Conductor

conformity to IEC-60228

**Temperature Range**: -65° C to 120° C (EED-50-12 Cables)

- 30° C to 120° C (EED-50-13 Cables)

**Insulation**: Electron Beam Cross Linked Polyolefin compound (EPR / EPDM LFH) /

Silicone Rubber

**Screening**: Annealed Tinned Copper / GI Wire Braids

Outer Sheath : Electron Beam Cross Linked Polyolefin Compound (EVA / EMA / EEA LFH)

**Protective Barrier**: Fibre Glass Braid / Lacquer Mica glass tape to meet the Fire Performance

(applicable for EED-50-13 Cables)

### **Special Navy Cables**

VG 95218 Part 61–66 – Power Navy Cables, Light Power Navy Cables, Telecommunication Navy Cables, Light Telecommunication Navy Cables.

**Construction**: Multi Core Cables, Multi Pair Cables Unscreened or Individually Screened

or Collectively Screened (Optional GI braided armoured) Limited

Fire Hazard Sheathed

**Conductor** : Circular Annealed Bare Copper conductor

**Insulation**: EPR / HEPR as per relevant spec

**Screening**: Annealed Tinned Copper Braid, Individually Screened or Collectively Screened as

per relevant spec

Outer Sheath : LFH Elastomeric Thermoset Compound

**Temperature Range** :  $-30^{\circ}$  C to  $+90^{\circ}$  C

**Application**: For use on board surface ships and crafts and power, control, lighting,

submarines for communication and instrumentation circuits



### **Marine / Shipboard Cables**

### **DEF STAN 02-526 (NES 526) and DEF STAN 02-527 (NES 527)**

For use on onboard surface ships, submarines and crafts for power, control, lighting and communication and instrumentation circuits with or without fire survival characteristics.

**Construction** : Single Core, Multi Core, Multi Pair & Triad, Unscreened or Individually

Screened or Collectively Screened, Limited Fire Hazardous Sheathed Cables

**Voltage Grade** : 440 V AC

**Conductor** : Circular Electroplated, Annealed Tinned Copper

**Temperature Range** :  $-30^{\circ}$ C to  $+105^{\circ}$  C

**Insulation** : Dual layer of Gp5 and LFH Material / Silicone Rubber

Screening : Annealed Tinned Copper Braid

Outer Sheath : LFH Elastomeric Compound

**Protective Barrier**: Glass Braid/Lacquer, Mica Glass Tape to meet the fire performance

applicable for DEF STAN 02-527 (NES 527)

#### IEC 60092-350, 353, 360 & 376, BS-6883, BS-7917

**Construction** : Single Core, Multi Core, Single, Multi Pair, Multi Triad and Quad Screened

& Unscreened, Armoured & Unarmoured

**Voltage Grade** : 150 V / 250 V and 600 V / 1000 V AC

**Conductor** : Electroplated Annealed Bare / Tinned Copper of various classes

**Temperature Range** :  $-15^{\circ}$  C to  $95^{\circ}$  C

**Insulation**: XLPE / EPR / HEPR, HF 90 / S 95

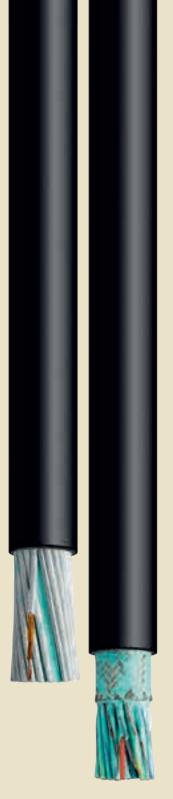
**Screening**: Al-Mylar Tape along with Drain Wire / ABC or ATC Braiding

Inner Sheath : SHF1 / SHF2 / SH / SF

Outer Sheath : SHF1 / SHF2 / SH / SF

**Braid Armouring**: Bare Copper / Tinned Copper / Gl Wire Braid with > 90% coverage

MIL W-22759 / 32-35 & 41-46 and MIL STD-2223



### **Pressure Tight (PT) Cables**

Power, Control & Signal Cables, Halogen Free and Flame Retardant, Fire Survival with low smoke generation and low toxic properties of insulation & sheath. These cables are suitable and designed to withstand radial and axial pressure up to 10 to 72 bar pressure.

**Specification**: EED 57-03 & EED 57-04

**Construction** : Single Core, Multi Core, Multi Pair, Unscreened, Individually Screened &

Collectively Screened

**Voltage Grade** : 600 V AC to 1000 V AC

**Conductor** : Circular electrolytic bare copper (Class 2)

**Temperature Range** :  $-30^{\circ}$  C to  $+120^{\circ}$  C

**Insulation**: Special halogen free and fire retardant with low smoke generation and low toxic

properties with E-beam curing process

**Screening** : Annealed tinned copper braid

**Outer Sheath** : Special halogen free and fire retardant with low smoke generation and low toxic

properties with E-beam curing process

Water Blocking Compound/Tape : Provided to withstand pressure requirement

**Application**: Used in Submarines for Power, Control, Lighting and Communication and

Instrumentation circuits

### **UL/CSA Listed High Temperature Aerospace & Missile Wires & Cables**

High Temperature Cables are used in areas where both working temperature and ambient temperatures are too high. They are made with a wide range of conductors, insulating materials and screening materials depending on the temperatures and conditions under which the cable has to perform.

**Construction** : Single Core high temperature hook-up wires & Multi Core / Multi

Pair, Screened / Unscreened and Armoured / Braided Cables

Voltage Grade : 250 V AC, 600 V AC & 1000 V AC (Rating as per MIL-16878, VDE, DIN, ANSI)

**Insulation Materials**: PTFE / FEP / PFA / PEEK / ETFE / XL-ETFE / Silicone Rubber /

Varnished Fibre Glass Braid

Electron Beam Cross Linked ETFE (XL-ETFE), a type of Thermoset Insulation, provides excellent fluid / oil / moisture resistance also creates increased stability at higher temperatures. Wires and Cables conforming to MIL-W-22759/32-35 & 41-46 and MIL-STD-2223.





#### **Solar Photovoltaic Cables**

Solar photovoltaic cables are used for transmitting electrical power generated from the solar panel to the charging units, battery banks, change over systems, inverters etc. These cables have to function effectively while remaining exposed to a wide range of severe environmental conditions.

#### Construction

Size	Number of Strands/	Nominal Outer Dia	Max Conductor Resistance
(Sq mm	Diameter	(mm)	Ohms/km
2.5	50/0.25	5.50	8.21
4.0	56/0.30	6.00	5.09
6.0	85/0.30	6.80	3.39
10.0	140/0.30	7.70	1.95
16.0	128/0.40	8.80	1.24
Size (Sq mm)	Single Cable in Air (Amps)	Single Cable on Surface (Amp	ss) Multiple Cable on Surface (Amps)

**Voltage Grade** : 600 / 1000 V AC

1000 / 1800 V DC

**Temperature Range** : - 40° C to 90° C

Maximum Conductor Temperature: 120° C withstands 250° C for 5 secondsConductor: Tin Coated Copper Class 5 conductor

Insulation: Electron Beam Irradiated Cross linked Polyolefin CompoundStandards: TUV-2PIG 1169 / 07 2008 (Standard for Photovoltaic cables)

or BSEN 50618-2014 (Covers upto 240 Sq mm)

Features : Resistant to ozone, water absorption & severe environmental conditions

Working life of more than 25 years

#### **Wind Power Cables**

#### **Torsion Cables**

These cables are used for transmitting power from the generator mounted in the nacelle of the wind tower to base station. These are flexible cables made of special elastomeric compounds, so as to meet the torsional stresses exerted on the cable due to rotation of the nacelle in relation to wind direction.

**Voltage Grade** : 600 V / 1100 V

**Conductor** : Flexible Class-5 tinned or bare copper

conductors, made to IEC-60228 / IS-8130

**Range (Single Core)** : 10 Sq mm to 300 Sq mm

**Insulation** : EPR - in conformance to IEC-60502 / IS-6380

**Sheath** : Special elastomer compound with Oil, Fire, Hydrolysis & Torsion

resistant properties (Zero halogen sheath available on request)

Feature

Maximum conductor temperature (continuous) :  $+90^{\circ}$  C Short circuit temperature (max) for up to 5 seconds :  $+250^{\circ}$  C Maximum permissible tensile load on cable :  $\pm 100^{\circ}$  per meter

Minimum bending radius : 8 D

#### Control & Instrumentation Cables

These cables are used in Wind Energy applications such as rotor blade pitch control, Yaw control, Top Box, Anemometer feedback, Remote data logging etc. Construction of Cables shall be as per Customers' requirement and conforming to various National/International Standards.





Complete In-house expertise & facilities to provide the entire range of High Temperature Insulations

### **High Temperature Cables**

High temperature cables are used in areas where both working temperatures and ambient temperatures are too high. They are made with a wide range of conductors, insulating materials and screening materials depending on the temperatures and conditions under which the cable has to perform.

Single Core high temperature hook-up wires & Multi Core / Multi Pair, Screened & Unscreened and Armoured & Unarmoured Cables

**Construction** : Single Core or Multi Core / Pairs

Voltage Grade : 250 V AC, 600 V AC & 1000 V AC (Rating as per MIL-16878, VDE, DIN, ANSI)

**Conductors** : Annealed bare and / or tinned copper conductor (up to 120° C)

Annealed silver plated copper conductor (up to 200° C)

Nickel plated conductors (up to 260° C)

#### Insulation

Insulation Material	Temperature Range	Characteristics
PTFE	- 200° C to 260° C	Excellent chemical resistance. High temperature stability
FEP	- 200° C to 200° C	Good chemical resistance Thin wall insulation due to good electrical properties
PFA	- 200° C to 250° C	Good chemical resistance, Thin wall insulation due to good electrical properties. Good flexibility
PTFE	- 150° C to 150° C	Mechanically tough
XL ETFE	- 150° C to 250° C	Good electric insulation, radiation resistance, ARC tracking and cold flow
PEEK	- 160° C to 250° C	Mechanically very tough High temperature and radiation resistance
Kapton Tape	- 250° C to 300° C	Very thin wall insulation. High temperature resistance
Silicon Rubber	– 40° C to 180° C	Flexible and abrasion resistance
Ceramic Yarn / Quartz Yarn Braiding	600° C	Chemically stable and higher thermal resistance

**Screening** : Individual and / or overall with following options

Aluminum Mylar / Copper Tape with Tinned Copper Drain WireBraided with Bare or Tinned or Nickel Plated or Silver Plated Copper

**Armouring** : Steel galvanized wire, stainless steel wire, high strength steel wire braiding

**Standards** : JSS-51034, JSS-51038, UL-1581

**Industry & Applications** 

Steel : Cables for blast furnace, electric arc furnace, hot & cold rolling

mills, steel refining facilities etc.

Communication : High frequency co-axial cables for VHF, UHF and XHF transmission

Marine : Engine proximity wiring for good resistance to high temperatures,

fuel oils, chemicals, saline air/water etc.

Petrochemical : Instrumentation & control, temperature sensing, fire warning etc.

Power : In proximity to the turbines, boilers, ash handling etc.



### **Material Handling Cables**

### **CRD & Trailing Cables**

These cables are used in conveyor machinery such as transfer cars, boom-stackers, side arm chargers, bulk material conveyors etc. They find application in almost every industry segment like Steel Mills, Cement Plants, Docks, Power Plants, Automobile Industries & Refineries and Petrochemicals.

**Construction** : Single cable comprising multiple elements like power Cores, control Cores,

signaling pairs, etc for multipurpose functions

**Voltage Grade** : 600 / 1100 V AC

**Conductor** : Class 5 flexible tinned or bare copper

**Insulation**: EPF

**Screening**: Tinned or bare copper wire braid

**Inner Sheath** : HOFR Elastomer

Anti Kink Braid : Fabric braid embedded between inner and outer sheath

**Outer Sheath**: HOFR Elastomer

**Features** : Designed to withstand continuous reeling and unreeling sheath materials

that have a high degree of flex fatigue resistance, excellent heat, oil and fire

resistant properties

**Operating Temperature :**  $-20^{\circ}$  C to  $+90^{\circ}$  C

**Test Voltage** : 2500 V AC **Bending Radius** : 10 D

Core Marking : 1-5 Cores colour coded as Green / Yellow, Blue, Brown, Black, Grey or

Coloured Rubberised cotton tapes. 6 Cores and above with numbered

Cores, with one earth Core of Green / Yellow

**Standards** : IEC-60228, IEC-60502, IEC-60332

### **H07RN-F-Heavy Duty Rubber Cables**

These heavy duty elastomer cables are used in generators, heavy machinery, portable power tools and equipment, moving machinery in wet, hot or oily environments. Their flexibility permits use in constricted spaces with sharp and complex bends. They can be made with special abrasion resistant sheaths to withstand rough use in portable equipment.

**Voltage Grade** : 450 / 750 V AC

**Conductor** : Bare or tinned flexible Class 5 conductors as per IEC-60228/1

**Range** : Single Core: up to 300 Sq mm

Multi Core: 1 Sq mm - 2.5 Sq mm up to 61 Cores

4 Sq mm - 6 Sq mm up to 19 Cores 10 Sq mm - 300 Sq mm up to 5 Cores

**Insulation** : FPR

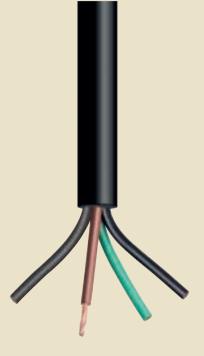
**Sheath** : Black heavy duty elastomer

**Temperature Range** :  $-25^{\circ}$  C to  $+85^{\circ}$  C

**Colour Coding** : 1-5 Cores colour coded as Green / Yellow, Blue, Brown, Black, Grey or

Coloured Rubberised cotton tapes. 6 Cores or more with numbered Cores

and earth Core of Green / Yellow









### **Foundation Fieldbus Cables**

These Cables are meant for bi-directional communications protocol used for communications among field devices and to the control system. Installed in many process applications such as refining, petrochemicals, power generation, even in food & beverage, pharmaceuticals and nuclear applications.

**Voltage Grade** : 300 V / 600 V

**Conductor** : Plain/Tinned Annealed Copper (up to 120° C)

Silver Plated Annealed Copper (up to 200° C) Nickel Plated Annealed Copper (up to 260° C)

**Range** : 22 AWG / 18 AWG / 16 AWG / 14 AWG

**Insulation** : Solid Polyethylene / XLPE / PFA for temp. > 150° C

**Screening**: Individual and / or overall with following options

- Aluminum Mylar / Copper Tape with Tinned Copper Drain Wire- Braided with Bare or Tinned or Nickel Plated or Silver Plated Copper

Inner Sheath : PVC / FR PVC / FRLS PVC / ZHFR / LSF / FEP / PFA

Armouring : Round Galvanized Steel Wire / Flat Strip / Steel Wire Braid

Outer Sheath : PVC / FR PVC / FRLS PVC / ZHFR / LSF / FEP / PFA with Plain Orange Jacket or with strip for easy identification and Blue jacket available

for Intrinsically Safe applications

**Standards** : Cable specification Foundation Fieldbus FF-844 H1, Cable design based on

EN 50288-7 / BS-5308 Part 1, IEC-60332 Electrical properties: FF-844 H1 and

IEC-61158-2, Type A

**Our FF Cable Features**: Excellent Electrical Characteristics Low Capacitance (for long runs)

RoHs compliant and CE marked

### **Special Application (LFH) Cables**

Power, Control & Signal Cables, Limited Fire Hazard Insulation & Sheath materials with halogen free, fire retardant with low smoke generation and low toxic properties.

**Specification**: Def Stan 61-12 (PT-18 & PT-31)

**Construction**: Multi Core, Multi Pair, Composite Cables, Unscreened, Individually Screened

& Collectively Screened

**Voltage Grade** : 600 V

**Conductor** : Circular electroplated & annealed tinned copper

**Temperature Range** :  $-50^{\circ}$  C to  $+120^{\circ}$  C

**Insulation** : Special Halogen free and fire retardant with low smoke generation and low

toxic properties with E-beam curing process

**Screening**: Annealed tinned copper braid

Outer Sheath : Special halogen free and fire retardant with low smoke generation and low

toxic properties with E-beam curing process

**Application**: Used in defence especially in Radar & Missile launching system for Power,

Control, Lighting and Communication and Instrumentation circuits







### **Co-Axial Cables (RG Series)**

Radio Frequency or Signal Transmission Cables, Polyethylene Dielectric Insulation & Sheath material with Halogen Free, Fire Retardant with low smoke generation and low toxic properties.

**Specification**: Def Stan 02–512 (PT–5) & customer specification

Construction : Single Core, Multi Core Cables, Unscreened Collectively Screened
 Primary Conductor : ABC / ATC / SPC & special conductors like CCS (Copper Clad Steel) etc

**Temperature Range** :  $-30^{\circ}$  C to  $+120^{\circ}$  C

**Insulation** : Polyethylene / FEP Dielectric Compound

Outer Conductor
 Outer Sheath
 Special halogen free and fire retardant with low smoke generation and low toxic

properties with E-beam curing process

**Type of Cables** : RG 11, RG 213, RG 188 etc.

**Application**: For use of VHF (Very High Frequency) signal transmission

### **VFD Cables**

VFD cables are used to connect the VFD drive to the variable frequency motors, drives precisely controls the speed and torque of the motors. During this operation of controlling the motor by changing the frequency there is every chance of lot of noise getting generated, induced voltage and sudden spikes generation and intense electric field around the conductor which can be suppressed with special design.

Construction: Metallic layer over the core/cable will reduce the noise/strong electric field around

the core / earthing of all spikes generated during the operation.

Voltage Grade: Up to 1800 / 3300 V AC

**Conductor**: Circular electrolytic bare copper / tinned copper (stranded / flexible)

**Insulation**: XLPE or EPR or HEPR

**Screening**: Combination of copper tape and copper wire braid or double layer of copper tape

and concentric braiding

Outer Sheath : PVC / ZHFR / SHF1 / SHF2

Application : This construction of metallic layer over the core/cable will reduce the noise / strong

electric field around the core / earthing of all spikes generated during the operation.

### **Cathodic Protection Cables**

For added protection against corrosive gases and brackish water, a PVDF fluoropolymer insulation covered by an HMWPE jacket can be used. Polyvinylidene difluoride (PVDF) inner layer has exceptional chemical resistance when present in chlorine, sulfuric acid and hydrochloric acid. High molecular weight polyethylene (HMWPE) exhibits superior dielectric and tensile strength and protection and can withstand considerable abuse during installation.

Used for underground DC power supply feeder to cathodic protection systems for pipelines, storage tanks, and other buried or submerged structures

**Construction/Range**: Single Core up to 95 Sq mm

**Voltage Grade** : Up to 1000 V

**Conductor** : Bare Copper / Tinned Copper Standard / Flexible Conductor

**Primary Insulation**: PVDF Fluoropolymer / ECTFE (Halar)

**Outer Sheath**: High molecular weight polyethylene (HMWPE)

### **Certificates**



#### CERTIFICATE OF CONFORMITY

Cartificate No.:

Cornet Stuti

WHITE SHEET SAME

This is to certify that the product(s)

#### Power, Control, Instrumentation & Thermocouple Cables

#### THERMO CABLES LTD.

Servir been excessed with respect to the requirements and deen in jurists 3 of Annex EL of Council directive 2014/75/EL or exemption and/or and found to comple. Author destant of product and augmentative productions, the contribute to be read to trut-Reference to the part of this sectificate which may lead to recommendation in risk

MINISTER OF THE PROPERTY OF THE PARTY OF THE

Therme Cables Limited

CL, LL, PARE, Serve tols Tolks

Market to the Against the Market

Owner, In Print

Ryan

**Type Approval Certificate** 

CERTIFICATE OF ACCREDITATION THERMO CABLES LIMITED, TESTING LABORATORY has been account and according in accordance with the standard ISO/IEC 17025:2017 "General Requirements for the Competence of Testing & Calibration Laboratories" for its facilities at be the Sold of TESTING Signed for and on behalf of NAM.

Liebter

### Indian Register of Shipping

#### Works Approval Certificate for Manufacturer of Electrical Cables

This is its results that, benefits the extincing manufacturing facilities and antidensity sold of Manufacture and Quality Control procedure to our Surveyors, the state of

MMs. Thurmon Cables Limited et al., et al. 19 nov-F.10.4. Anthodox Sydmolox (1900)(4.7) of Solic SZ (664): Days delented that Josepholox SM SS. One (664)(et-page 27)

Manufacturing Standards

1. See America's 1 1 See Assessment

Condition of Approval

- This contillate is valid until \$5<sup>rd</sup> August \$650

PRINCIPAL SURVEYOR

## (UL)

### ENPARAMERS NORMANICES NORTH

EAL

EZPTROMENT CONTRETETRAL NAME AND ADDRESS OF THE OWNERS.

and an income to the Co. State of the contract of the contract

Colds There can be a second from the second or those hand to the or the Author States and States States and St

REALTH STATES CO.

CETTORINAT CONTRACT THE BALLET AS OFFICE AND A SECOND CONTRACT OF THE CONTRACT

Married Street Square

Class cortes for apprile our report by comparison or "My Systems devices for the selection of the selection

Andrew Petros, Charles, Sair Type, No. 24 (1977) (per, Prince of Ministrian, Sangation Street, Sairy, Sairy

 $0.00, 0.00, 0.00 \le 0.00, and code, by bound between total$ 



### **International Approvals**







PERSON TO FOUR PRODUCTS AFFECTIVE LETTER SAFELY SUPPLIED AT THE TOWNS OF THE PERSON SECTION OF THE SAFELY OF THE PERSON SECTION OF A LATE OF THE PERSON SECTION SECTION OF THE PERSON SECTION SECTION OF THE PERSON SECTION SE

THE REST CAREA, INSTRUMENTS DISCUSSED THERMOSOCIAL WARE & CARLOS

THE COMPANY PRODUCES COME MANAGEMENT TO FOUR COMPANY IN APPLIES

A BASE SHALING TO DOWN THIS CASE AND ARRYS FILE NO. OR ALL YOLD PLYCHE THIS SHALING HAVE BEEN AND ARRYS FILE NO.

Market Street

THE OPPOSE EXTERNISHED BY SETTING SHOW MAY SAVE

MOTE, AMMERICA, COLUMN IS IN TO JUT MAY JUST PATRONED MICE JUT MAY JULY

PLANE BATTE CYBELAN FOR INCTIONS

N/h, Therein Cather United For the 46 county

FROM: Your Loader Scooler Mostlandto Hanagement

P.D. No. - 9720, 41000 Francis, Number For-Sec. (1963) 21877833

SHEET: BE QUALIFICATION OF VENDOR APPROVAL NOTIFICATION

DUT HET: YOU SHIRKLINGSCHIPP. PRINTERS.

the are phased to follow you that your application to intelling the KCC approved but of man-tion bean approved for the product category and manufacturing facility treatmost later brone.

PRIDUCT CRITISTS: 1.00 - INCOMPRESENT & COMPRESSATING CARLEY (WOWN LAKE WEARTHSE CARLES ONLY)
PAIGLITY ACCRESS: INV. THERMO CARLES COLLYTING PAIGLITY ACCRESS DECURTING PAIGLITY ACCRES

Validity Frame DE" Suphember 2021 to DE" Suphember 2020 (5 peace)

1. VEC-04945/29/EC/02/2013 dated 10" October 2021

2. VEC-04943/29/EC/02/PF (0012) and 10" October 2021

2. VEC-04943/29/EC/02/PF (0012) and 11" October 20

This replication of approval to bound unitant to the following, falling which have for consultat his coldination of suproval in hasted select for the following, failing which name for consumer and the discretion of ERCS:

• To applied regularly with the lamit, product couplings of information.

• To furnish follogistary Qualitations on its winner requested.

• To furnish Audited Resould debtation for more personal records.

• To applied with lamit content debtation for more personal record.

• To applied with familiary content debtation for more personal records.

• To applied required from the Congrey of Respirate (1 should regime to the date of require).

• To should required for the Qualification of required (1 should a given to the date of require.

• To should all wide improvidency certifications at all towns.

For Kneedt Oil Conygany

Abdul Azeez Redha Hussain

AND REPORTED THE PARTY NAME IN STREET TETROLINA DOVINGMENT CHANGED THEFTHE CARLES LIMITED DOLBATRY OF CHICAR TECHNICAL SUPPLES INTERNATIONAL CO. LOCAL AGENT POSTAL ADDRESS: ALL ATHERMAN P. D. Sex 130 dissection with the contract of the offence register report of not be required record order to record. AL ATTOMISE P.O. Sea 130 Busine SCHOOL PICTISMENTATION

-

شَكَةُ تَتَنفيةً تَفطعتُمانُ مِن Petroleum Development Oman L.L.C. COMMUNICATE OF RECORDING OF PRODUCT ASSOCIATION





# April 2017

THERMO-CABLES LTD
JS NAGAREINA HELLS PENJAGETTA HYDERABAD 19990Q
JSBIA

Deer für Meden.

We are pleased to inform that after evaluation of poor adjust application for par-quellification (MMVBMCIDE), your Company has town from registered as a approxima-vature for extension's curvature to your regar. You have been employed with thread Wand-cock and you will be provided to participate to not future tradies. However, for all quality establishs and official towns you will be expensively approved by individual incess based or an entailed procedure of lampings reduction.

Obtoigh we conquise that propriesses, dealers, netherited agents or distribution may field actionic legal rights researchy over conditional product lines, we do not concurage the ord-restent of intermediative, appriess or other that garden and profit to had delevely with medicars, standartures, appriess and service provides. If you envisage the interference theretoolises to your trading with After your cent of dynam registral parting the means of testimologistic to your trading with After your cent of dynam registrally sating the means of each provincement and confirmation of that note, and provide the terms of agreement services to see and their intermediative as well as effected administration for commonly marker. This followships there were to After's Mininger - Procurement & Warshaming followed to.

ner Vinder unds with Alba is TPM, des qu'i facen references. Nos stay den corpact us with roller splates, profile changes and other queries if are, fivringly purchasing gang on one review gars, allemantate acres or sent if ny e-neal ir splanting-filter mouse, let instrument order cross. Alba, we reasonment visiting one porchasing page and mading oil dis formation and gardelines to oughther.



THERMOCABLES LIMITED

Tel: Fax: E-mail ADCO Reg.No. 31248 Manufacturer ( ENABLED )

Expiry Date

Status

OwType (%) Holding Nationality Country

Manufacturer

CABLES - FOR INSTRUMENTS & CONTROL CARLES - FIRE RESISTANT

the state of

#### Commercial Support Manager



We are pleased in others any that your Company has numerically companied the application process in numerical with Engangements.

The qualitation shorts for the supply of power prints sension for the belowing community.

RESIDENCE - SVETNIGHTON CABLES (ARROUNDS AND UNUNBOUNDS)

Power was het pas town town majoriest it our visuler Management Sala Name with rode 19923 for you are really requested in content or of communication with fairners.

Such respectation and has placed or objects the property of tables on Section as well as I shall not one the transferred providence of your Company in Nove toll sectional to Septem.

The qualiforative has a lift (freely and recent) catalog, and the qualiforative protein will be represent through facilities analysis and if regulated, dutill only at part offices and/or provinces.

We tests see you'le prompty where as if any change if your Conjumy projectables by young our wallale web subject can and execting "Qualiforder Nonoperson" area.







### **Major Approvals**

Auf No. AND, OCHRO, VAL (1929) DE PROEE AT TO THE PART THE BROWN CARLING CONTROL MAR DANS DELLOS. OTTERNAMO TOUR DEZ MARRIORY DOUTROES TELANGAMO TELTY NAME AND ADDRESS OF PARTY OF PARTY OF THE PA New York Control of the Control of t 8. Category of Registerior . B. Compare of Representation

Absorbance and Commany for exercing

B. Sch. Gal. (Self-)

- Indicated an office of production.

The Control of the Lab reservers the night for command poor magnification of any time exerts

France of the Lab reservers the night for command poor or template to one of the Control of the Con



MATHEMATIC ARRESTMENTS

TR NAGARIENA HILLS. PLINARIETTA, STORIKABARIENINET

Printer stills to 1000 September Bull. Yor: 1795,DM, for Replement with Mile Managem Deals of Halling at Ingels as regulate.

We are pleased to relieve you that on the basis of deciments relievely an exembed by you to the principles from a basis for the basis decided at register your fain as at approved Supplier with offers from date losses of the beam for the beamed groups indicated below up to the 21 to 2015.

MATERIAL CHOICE CARREST LINE CO. C.

7. You was approach to at least \$6 day paint to explic of the segments for squeezi. You may apply for trivinal addition on our walkers Asymptoticly you may developed the respect from time than 1620, vertices and catech the property force with Taylorowers, Please was the 2s shall be joint suppossibility to obtain informations, for my substance of the regulation.

He Registration Number allocal to you is 1000014. This sender should be garnet or all fators commenced with MIX.

3. You may keep citaling our writing for quering against one with small.

You are expected to interest to an changes, if see, in model address, to the constitution of mosting of set from machiners. Suring the partners of regionalise, along with supporting accounts for along of

side.

MANUAL BROOKS AND ARTHUR



With the laboration

MET It we again must have To PML. Dated 44-96 T-9409

We are present to inform the pass for the experience on a specimen appear commence or the Leff Terpor dentity procedures.

A Prince of Valueties or Requirements on T. Commence (CASES) (Section).

A Prince of Valueties or Requirements of Termoniques (Section of Valueties or Valueties (Section of Valueties or Valueties or Valueties (Section of Valueties or Valueties or Valueties (Section of Valueties or Valueties or

Section 1 (1997) The Section 1



HINDUSTAN SHIPYARD LTD

#### NAMED OF THE PROPERTY OF THE P

Thippard Lamasia.

2. We see pleased to minor that Man, DERMO CARLES LIMITED, 28 Nagar Entergritta, Rydrocalcul (1986) of the continuous of their equalities of species to invest equal the force of the send of the Engineers & S. Co. Sect. As well in Engineer and Section .

Tappiter unique to the exer-

The Adults of registration and as below

(i) Registrative by or Busher of Brown have not be which again O Copper c) Wombers band

mity he flattic and solve as in total histories are experienced with 1864. To quality by 1960 y the

6. The Region arms Columns is a color up to \$3.96p \$900 and in-Regression or estimate and in to rights, March 1950-2176, ed. State 6.1) (42-2022)

Since d'Arbon (MS)

acce.



Committee of Space Others of the Head (MA), 6990 (HQ UPSC Compus, NO Feet Read (HA), 12 Stage (HPO Servation - 1981 (MS), MCM Fac. (MC - 2000 2 MS) (12000488 Talestone 1880

THE CHESTON HORIZON CARLLESSEN HERE!

Describe 13,200

Tue: Entermore of MT & LT Cable Manufacturers - Reg.

THE T. LOT BY CHOOSED HOSE CONTYSTS ON TORNOOTS 2. ECR. Configuration I Dr. 36/01/5915

This is with reference to the Consessions of Interest recorded from any in response to arroys care above. Based on the verification of credentals autoritied with your

Expression of interest as absolute and inspection at your manufacturing and by the importance, you fire has been existed as an appropriat "LT" Califes Manufacturer will

Contraction and so

waster guli hand the watterfor



auto: pitted (file en.), fileof en de, of file or en en the liquid etc fileon. I litted one file has not a stable Procuratement Development Department

He other because application or unique market and are pleased to other dust your entered with IT. Loc investigated his there as the other below.

Eable Medium Fridays Places PCC / NEW Tops of recognition from \$1,500. California Company of the County of No. of Comm Colombin for all Tage of Insulations Purc & KUPE Remarkage Into Galor F

This princework is sold for your works bround or 61, 62 (MM), 64 (MM) & 610, Since his last lock, line, Markschaiger 100101, Minagers)



### **Accolades**

allow where took after tipe office afterior as analysis after other day precisioner



Diffus of Sr. December Mechanism by Sweet Seet Sheet, Minhampaparam Sweets Seet State States (600 cm) San 1880 (161 (1880)

Sale Participance builtural of committee troubled titre – good 695(#) and shade his SSPS-179 copied by MA. Tremo Sales Limited Ryderalisel-ing.

Ref: 53 Ferris, letter No. 311/Thermo/ESPE/copysidetes, etc (3.65.000) (0.9000/scene No. 50.0PM/sideo 3, etc (0.40.000)

tride under nel SD, Performance Regillank of Laconnoise Inscalable Wine — cost-field smaller, spec. No. 1599-179 (suppost lip bijk Toelno-Cables) (sense) historial Wine — cost-field smaller, spec. No. 1599-179 (suppost lip bijk Toelno-Cables) (sense) (sense) (sense)

PONL B	Ony .	See	sizzi	Oto Contespone of top Statement (on contents approximately	Final is Lose No.	State of Stream	Parlamenta Southers	
	J100H	Elever'	1500	Min	(403)	14.00.7	Sylvenia	R
	MALCON		The state of the	25 e	100	17.017	Satisfactory	ł
				No.	HIN	2932.7	Specifications	
				No.	Her	Lates	Selections	1
				Min	10900	1616.2	Altefortery	
				(A)m	HERE.	1100.0	Setulation	1
				1000	Spin. Study or reviews department	01.00.3 T To TO 4,000	Setubetory	



#### Date: 18.52.2521

#### To Whomsoever It May Concern

This is to confid that M/s Thermis Gattes Gat ~ Replandant has supplied the Science Color of Color Research Color of Colors Colors to Mily. Channel Matter fall behind proport through My. Yorkes Limited for Phase L and Phase I of Phase I filtrantial and Underground Restaura for Nation of Science Colors of Colors of

N. No	Purchase Order	Day	Total in talk	Calle Train	Project
	LUMBOUR	195,477.48	(6,40,00)	HILLYS CHAN	\$89-05-61-6-\$89-16
1	tomonost	191.30.19	RUNARI	PS College	MAKE THE LIST
	1100000004	D.01.10	18.40x11	HIGHT-Cales	MAKIN NO
	Linkberrowicz	1345.95	9,11,94,962	UMS/TI-CHINI	MACIN US
1	110000 ut 77	200	4,46,75,607	98(5/H1588H	M66 30-6w
	1000011000	1639.31	THARITY	PROPIGER	THE VISION & PRICE
+	11000017403	15.6520	6,245,960	PROD Calmino	MME SE Dev
	1100044004	1546.01	1,71,00,400	HRS / PE College	ARREST STREET
	1300044790	38.66.21	31,90,812	FECANO:	4686 10 HOUSE
100	1200084205	46.8524	25,64,640	PE-Custons	MAKE IZ MINE

M/s. Therms Lables have supported in meeting our propert schedules by suppoping Capitic authority objected definery period. The Cables on in specifier and site Nathermoray of the Cables in



CMU. Dayer, Admin Subling Francoides Bigh Send, Kovenheim, Chemic - 800 101. Franco 12700000 Par. 1270000 En. d. chamateumenhildenel in White: www.chamateumel.org



M/s. Thereso Cables Ltd. Plot No. Dr44, 45, 46, 47 & 50, Phose V. EDA Jandissettis, Hyderathed. Telerigens, India Par-160000 ne : 060-2507000K

(pf so some ste fifting some stem, to year) Becompress Dook Striptes Printed September 19 Manager Dark Lindbell, in the printed community. di mai shahi samanna di mai shahi saman, gali landang hasi kanga, Asaba - amata Tali Shig23 2379 8158 E-mai sadadhana@mapdock.com Fall No. (2007) C./Cattine Date: 16/11/7823

#### Approximing Letter to Mily, Thorono Cubins Ltd. Hydroxitad

MOL had a segent requirement of special cubic for Roll Low Hele Tearwring System (ELSTS) evident sprines, which was not evulable hults. The tender for this cubic was founded and only M/s. Thomas Cubics Ltd. has offered the supply of cubic mosting the rigoralist apartit requirements.

The PO for supply of this cubic was placed as M/s. Thereoe Cabbin Ltd. on M Sep D. As per PO terms and condition, the cabbi-matrix half-levely was M levels from the photonsoid. per PCI terms and con of PO to 34 Nov 25.

However, the trials of \$1,005 over scheduled in the limit work of November. In order to complete these trials as not delivery achealer to Indian Vary, MIX, respected M/s. Therese-Cables Lid. to supply this special cable settins 20 modes in fine of 20 works as yet PO which was agent by M/s. Thermse Cables Lid.

MCL and ballon New representatives had regolar interaction with the following concidence of M/s, Thomas Calife Ltd. In each search security of the radio and maximal ordered congression. These reconstructs have search the special affects and first each to expectite the computer of the c obiction of the cables

- . Mr. ferromana East, President (Market
- I Mr Marish Admirlie, St. CM(Marletin S. Mr. Volyseagur K. DGM (Directoryment)

MCK, management highly approximes all the efform and commissions: above; by  $M/\kappa$ . Therese Carlon LM. for supplying the critical cable: below a hashable and colorating timely support to MCK.



while finning fields



#### To Whomsoever It May Concern

This is to swittly that M/s. Thermo Cables Ltd., Hydershad has successfully executed 28 Kms of RG-13 Co-solal Cable vide our PO No.4030004343 dist.04.03.2025. Therma Cables has supported in meeting our project schedules by delivering Cables as per the terms and conditions of PO. The Cables are in operation and the Performance of Cables in found to be

or Cochin Shippard Ltd.,



hone: +91 484 2501429 Arbite: +91 8130027484







13-04-3535

#### To Whem the Even St. Has porquite

this is to certify that the filterine Earths contail, textended it on the angular for CKD Application Companies Francis BPK Earths suitable

No. of Thermon Calobia, List Raid Supplemed 2007 & 2000 9979 of RCX 3850, mon-in 2004, mon-and DCX 2-550, entries 2018 2-550, more Configuration Calobia settle 6 year the CREE Applications. Nov-leaf SHSSEL CARK Project

33 V20K/+00073/GAP/C/A70KBHSSIA DAMERSI/02/2017 - 6H6F4

\$11298, PROSESS CAP / C / \$700007394 SHIRE \$4/91/3918 - KK 6 PS 58

Supposed Composins CRD Callies have Stein europeaticity industrial for framelys CAR August 2017 is hely 2018. The performance of the cable satisfactory IVE 8861.

Dies manufactured & delinered in the op per the Purchase or witten the delinery alreadule & quality opporation. Their performance for our freigicts has been estimatory as an date.

Ford STreet.

13



Hitachi Energy India Limited 560058 Bangalore, IN TO, THERMO CABLES LIMITED Melbooknapsr(Dist), Plot No. 01, 02(A), Green Indus JADCHERLA, JADCHERLA India

Type of Cable	Item	Qty (Metre)	PO No	PO Date	Invoice Number & Date		
ZHFRLS	4CX6.00SQ.MM	11,000	5191308340				
	12CX1.50SQ.M M	10,000		27-09-2021	1)1000011392		
(Zero Halogen	7CX1.50SQ.MM	8,200			2)1000011410		
FRLS Sheathed) Armored Cable	4CX1.50SQ.MM	1,500			29-10-2021		
	27CX1.50SQ.M M	2,000			3)1000011411		
	19CX2.50SQ.M M	7,000			29-10-2021		



Hitachi Energy India Limited | Registered and Corporate Office: | Local Address: 8° Floor, Brigade Opes, 70407, | A44, 5 8 6 2nd 1 Modgehalt Bain Rocal Bengalum - 560 092 | Phone: 000 09473700, 000 23041800 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 600009 | 6000009 | 6000009 | 60000009 | 60000000

OHitachi Energy

# **Infrastructure**

## Machinery

Name of the Machine	Name of the Machine	Name of the Machine - Range/LC
Rod Break Down Machine (9 Die)	HOIST 'E' - 19 B Laying - 2 Nos	Fourier Transmission infrared Spectrometer (FTIR)
Rod Break Down Machine (11 Die)	HOIST 'G' - 30 Armouring - 2 Nos	Profile Projector
Rod Break Down Machine (13 Die)	HOIST 'G' - 30 B Armouring	Digital Thermometer With Sensor - 2 Nos
Skip Stranding Machine - 2 Nos	HOIST 'F' - 37 Laying	Hot Air Ageing Oven Hot Air Oven 6 Nos - Up to 250° C & 300° C
Electroplating Tinning Machine - 2 Nos	HOIST 'F' - 37 B Laying - 2 Nos	Hot Set Oven
Multi Wire Drawing Machine 30 mm	HOIST 'K' - 40 Armouring	Ozone Resistance Test Equipment
Multi Wire Drawing Machine 8 Wire - 2 Nos	HOIST 'H' - 48 Armouring - 2 Nos	Smoke Density Apparatus - 3 Nos
Fine Wire Drawing Machine - 4 Nos	HOIST 'H' - 48 B Armouring - 2 Nos	Oxygen & Temperature index Apparatus - 2 Nos
Mixing Machine 75 mm - 3 Nos	HOIST 'J' - 72 B Armouring	Flammability Tester - 3 Nos Cold Chamber - 2 Nos
Kneader Line - 2 Nos	HOIST 'F' - 96 Armouring	Cold Bend Cold Impact Test Set - 20° C to +25° C
75 L Kneader	HOIST 'K' - HV Area  HOIST 'L' - Drum Twister Area	Hot Set Test Apparatus - 3 Nos
Ring Marker  High Speed Core Rewinding - 4 Nos	HOIST C - Druff I wister Area  HOIST 'O' - RBD Area	Toxicity Index Test Equipment
Taping Machine - 7 Nos	HOIST 'I' - Despatch - 2 Nos	Halogen Acid Gas Emission Test Apparatus pH & Conductivity Test Equipment - 2 Nos - 0 to 14 pH
Vertical Taping Machine - 6 Nos	Chain Hoist 'A' - G I Rewinding - 2 Nos	Abrasion Resistatnce Tester - 2 Nos
Horizontal Taping Machine - 12 Nos	Chain Hoist 'C' - Simon Taping - 4 Nos	Electronic Tensile Tester - 3 Nos - 0 to 1000 N
Single Twist Bunching Machine	High Speed Bunching Machine - 10 Nos	Dielectric Breakdown Tester & Leakage Current Tester
400 Single Twist Bunching Machine	Chiller - 2 Nos	High Frequency Spark Tester - 8 Nos - 0 to 15 KV AC
Tandem Extrusion Line (Ø50 + 65/35 mm	Chiller 5 TR	Main Frequency Spark Tester - 2 Nos - 0 to 15 KV AC Digital Micro Ohm Meter 5 Nos - 1 mΩ to 19.999 kΩ (2 Nos.)
Tandem Extruder Line (Ø80+ Ø100/Ø35)	Chiller 10 TR - 2 Nos	8.1 mΩ to 1.9999 kΩ (1 No.)
Tandem Extruder Line (Ø35+ Ø50/Ø35)	Chiller 20 TR	H V Tester 4 Nos - 0-5 / 10 KV
Extruder Machine 20 mm Bi Color	PVC Mixer	Million Mega Ohm Meter 4 Nos - 1 MΩ to 100 GΩ
Extruder Machine 45 mm	High Speed Mixer 60 kg	Million Mega Ohm Meter 2 Nos - 1 MΩ to 50 TΩ & 2 MΩ to 20 GΩ
Extruder Machine 45 mm Bi Color	High Speed Mixer 120 kg	Digital L C R Q Meter Thermal E M F Error Test Apparatus - 0 to 200 mV DC
Extruder Machine 65 mm - 9 Nos	High Speed Mixer 200 kg	Digital M V Source Cum Meter - 0 to 199.9° C
Extruder Machine 70 mm	16 A High Speed Braiding - 3 Nos	Digimatic Caliper - 0 to 300 mm
Extruder Machine 70/35 mm	16 F High Speed Braiding - 2 Nos	Acid Gas Generation Apparatus 2 Nos
Extruder Machine 75 mm - 3 Nos	24 High Speed Braiding - 2 Nos	Swedish Chimney Test Equipment
Extruder Machine 80 mm - 4 Nos	24 A High Speed Braiding - 5 Nos	Water Immersion Test Equipment - Up to 100° C  4 Cell Ageing Oven with Data Scanning Logger 2 Nos - 16 Channels
Extruder Machine 100 mm	24 E High Speed Braiding - 4 Nos	Heating Oven - Up to 200° C
Core Rewinding Machine - 7 Nos	24 F High Speed Braiding	Thermal Stability Test Apparatus
Cooling Tower - 6 Nos	48 High Speed Braiding	Water Absorption Test Apparatus Gravimetric
GI Rewinding Machine - 20 Nos	3 HP Air Compressor	Electronic Balance 2 Nos - 0 to 180 gms
Ceramic Butt Welding Machine	10 HP Air Compressor - 3 Nos	Electronic Weighing Machine - 10 gms to 3 kgs Kelvin Bridge - 0-11 Ω
Butt Welding Machine - 15 Nos	15 HP Air Compressor	Torsion Testing Machine (Digital Control Meter - Up to 99999 Count)
Electron Beam Accelerator	20 HP Air Compressor - 2 Nos	Fire Survival Test Equipment
Pairing Machine - 4 Nos	25 HP Air Compressor	Static Noise Rejection Ratio Meter - 60 to 100 dB
Pairing Back Twist Machine	100 HP Air Compressor - 3 Nos	H V Break Down Tester - 0 to 2.5 KV DC
Laying Machine (7 Bobbins)	Brazing Machine - 4 Nos	Transfer Impedance Tester Steel Rule - 0 to 1 Metre
Laying Machine (7 Bobbins) - Single Twist	H V Testing - 3 Nos	Steel Test Mandrel Set
Laying Machine (13 Bobbins)	Drum Twister Machine	Condition Chamber 2 Nos - 20° C to 40° C (Temp.) & 40 to 80 RH
Laying Machine (19 Bobbins) - 4 Nos	630 Single Twister Machine 7 Bobbin	Insulation Resistance Tester - 0 to 1000 MΩ / 500 V
Laying Machine (37 Bobbins) - 3 Nos Laying (42 Bobbin)	800 Single Twister Machine 12 Bobbin	Hydro Meter 4 Nos - 0.700 - 1.000 g / ml
Armouring Machine (30 Bobbin) - 2 Nos	1250 Single Twister Machine 19 Bobbin DT 500 Buncher Machine	Digital Stop Watch 5 Nos - 0 - 24 hrs  Mutual Capacitance Meter - 1.999 nF - 1999.9 nF
Armouring Machine (40 Bobbin)	Scissor Lift 2 ton	Length Counter Meter - Up to 99999 mtr
Armouring Machine (48 Bobbin) - 4 Nos	Steam Boiler	Tear Resistance Die
Armouring Machine (72 Bobbin)	PVC Grinder	Coating Thickness Measurement Meter
Armouring Machine (96 Bobbin)	Hydraulic Press	Digital Multimeter 4 Nos - MΩ
Extruder Sheathing Machine 80 mm - 2 Nos	PT Stranding & Taping Machine	Inductance Decade Box - 10 mH - 10 H  Capacitance Decade Box - 10 pF - 10 µF
Extruder Sheathing Machine 100 mm	Silicone Rubber Mixing Machine	Wet & Dry Thermometer 2 Nos - 40° C to +50° C
Cable Rewinding Machine - 5 Nos	65/150 Two Stage Extruder (Compounding Line)	Glass Thermometer 05 Nos - 10° C to + 110° C & - 10° C to 250° C
GI Rewinding Strip Machine - 2 Nos	60 KVA UPS	Thermometer 02 Nos - 195° C to 205° C
Off Line Annealer	80 KVA UPS - 2 Nos	Digital Anemo Meter - 0 - 45 m/s
Nickel Plating - 2 Nos	100 KVA UPS	Digital Thermo Hygrometer 02 Nos - 0 to 95° C / 20 to 99% RH Senior Double Kelvin Bridge
Pointing Machine - 2 Nos	120 KVA UPS	UV Radiation Test Apparatus
Fork Lift - 2 Nos	160 KVA UPS	Notch Propagation Tester (Analog)
Auto Clave	200 KVA UPS	Water Bath (Size 120 cm X 90 cm X 60 cm)
HOIST 'A' - Skip	250 KVA UPS - 2 Nos	H V Probe Milimeter
HOIST 'B' - 54 Stranding	320 KVA DG Set	Abrasion Resistance Tester
HOIST 'P' - Stores	365 KVA DG Set	Dynamic Cut Through Tester  Cable Analyzer
HOIST 'C' - 7 B Laying	600 KVA DG Set	Universal Testing Machine
HOIST 'E' - 13 Laying	Inkjet Printers - 36 Nos	PC Based Crosstalk Attentuation & Impedance Meter Attenuation 0.1 to 20 dB,
HOIST 'E' - 19 Laying - 2 Nos	Laser Printers - 4 Nos	Cross talk (- 40 to 100 dB), Impedance 199.9Ω to 1.999kΩ

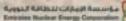
**Testing Equipment** 



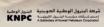


























































































































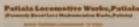






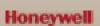




















































## Thermo Cables Ltd

An ISO 9001, 14001 & 45001 Certified Company

28, Nagarjuna Hills, Punjagutta, Hyderabad - 500 082 Telangana, India 491 40 44429292 +91 40 23350583 info@thermocables.com; exports@thermocables.com

London Office

C +44 7798771519

#### Plant - I

D - 44, 45, 48, 49 & 50 Phase V, IDA, Jeedimetla Hyderabad - 500 055 Telangana, India  Plant - II G 1, G 2 (A & B), G 9 (A & B) & G 10

Green Industrial Park Jadcherla, Mahabubnagar - 509 301 Telangana, India

8367449977 Baroda Bengaluru 9341002070 Chennai 9094539439 Delhi 9313438322 Hyderabad 9396745763 Kolkata 9339336204 baroda@thermocables.com bangalore@thermocables.com chennai@thermocables.com delhi@thermopads.com mpr@thermocables.com kolkata@thermocables.com mumbai@thermocables.com pune@thermocables.com



Mumbai

Pune

www.thermocables.com

9320643117

7709011059