Thermo Cables



Offshore Cable Solutions

Since 1990, Thermo Cables Limited has engineered high performance, customized cable systems for the world's most demanding environments. 60% of our products are exported globally, serving as the strategic backbone for mission-critical sectors. With R & D expertise, unmatched financial strength and a strategic subsidiary in the Kingdom of Saudi Arabia (Thermo Cables Arabia Limited), we ensure project continuity for our partners worldwide.

Thermo Group Ecosystem

Thermo Cables: Global Expert in Speciality Cables Manufacturing.

Thermopads: Global Specialists in Commercial, Domestic and Industrial Heating Solutions.

Thermosystems: Turnkey EPC leaders in Fuel Oil Handling and Fire Protection Systems.



Major Approvals

ADNOC - OFFSHORE
ADNOC - ONSHORE
ALBA
AP GENCO & TRANSCO
ARO DRILLING
AVANT GARDE
BALTIC CHEMICAL PLANT
BAPCO ENERGIES
BDL, BEL, BEML, BHEL, BLW
BOROUGE
BPCL
CLW, CMRL, CSL
DESEIN LTD, DGMS, DVC
DLW, DMDE & DMW
DLRL, DMRL & DMRC
DOLPHIN ENERGY
DRDO - ASL & DRDL
DUBAI WORLD
EGA
ENGINEERS INDIA LTD
ENOC
EXPRO
FICHTNER CONSULTING
GRSE, GSPC
GOA SHIPYARD
HALLIBURTON
HINDUSTAN SHIPYARD
HPCL, HAL, HMRL
INTERNATIONAL MARITIME INDUSTRIES
IOCL, ICF, ISRO
JACOB'S H & G
KNPC - KUWAIT
KOC - KUWAIT
LAMPRELL
L & T
MAADEN
MATERIAL ORGANISATION - KARWAR
MATERIAL ORGANISATION - MUMBAI
MATERIAL ORGANISATION - VIZAG
MECON, MEW, MCF
MN DASTUR & CO.
MAZGOAN DOCK LIMITED
MUMBAI PORT TRUST
NMDC ENERGY
NORTH OIL
NPCIL, NSTL, NTPC
ONGC
ORLEN, OXY
PDIL, PGCIL
PDO OMAN, PETRONAS
PETROPERU
QAFAC, QCHEM
QATAR ENERGY, QATAR PETROLEUM
RCF
SABIC
SAIL, SAIPEM
SAPURA ENERGY
SAR
SHELL, SONATRACH
TATA CONSULTING ENGINEERS
TECNIMONT ICB LTD
TOYO ENGINEERING INDIA LTD
THYSSENKRUPP

Stringent quality retention on par with global standards of thorough precision, Thermo Cables is a name to reckon with in terms of meeting complete customer demand by producing and delivering a wide range of cables. Our commitment to quality, on-time delivery, and competitive pricing has earned us a strong reputation across the industry.

Product Range

- Instrumentation Cables
- Power, Control & Earthing Cables
- Thermocouple Cables
- Fire Resistant Cables
- High Temperature / Heat Resistant Cables
- Foundation Fieldbus Cables
- Special Application (LFH) Cables
- Renewable Energy Cables
- Naval Application Cables
- Marine / Shipboard Cables
- Pressure Tight (PT) Cables
- Digital Data Communication Cables
- Railway Cables
- Material Handling Cables
- Type P Cables
- VFD Cables
- Co-Axial Cables (RG Series)
- ESP Cables
- Downhole (TEC) Cables
- Electromechanical Cables
- Cathodic Protection Cables
- Custom Wiring & Cable Harnesses
  - Railway
  - Defence
  - Wind
- IV Coupler & Jumper Cable Assembly
- Cable Systems

Why Us

- Leading & reputed manufacturer of Speciality Cables
- One stop solution for all Low Voltage Cables
- 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

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

Standards

- Cables designed and manufactured conforming to various National and International Standards

General Cables: ANSI MC 96.1, BS-6346, BS-5467, BS-7629, BS-6387, BS-7846, BS-5308-I & II, BSEN- 50288-7, IEC-60502-I, IEC-60189-I & II, IEC-60228, IEC-60584-I & III, IEC-60331, IS-8784, IS-613, IS-694, IS-1554-I, IS-7098-I, BS 16246, BS 7211, IEC 60227, UL 13, UL 44, UL 83, UL 1277, UL 2250.

Railway Cables: ELRS-0019 REV-4, CLW-0458 ALT-E, CLW-0459 ALT-C, EDTS - 132 REV - C, EDPS - 179, EDPS - 304, EN - 50264 - 3 - 1 & 2, EN - 50306 - 1, 2, 3 & 4, EN - 50382 - 1 & 2, EN - 45545 - 2, IEC 61156 - 6.

Navy & Marine Cables: EED 50-12 REV-3, EED 50-13 REV-2, DEF STAN 61-12 PART 18, DEF STAN 61-12 PART 31, DEF STAN 02-526, DEF STAN 02-527, MIL - DTL-24640C, MIL - DTL 24643C, IEC 60092 - 350, 353, 376 & 360, BS 6883, BS 7917, IS 9968 Part - I, IS 6380, EN 50525 - 2- 11-12-21-22-41-42, EN 50618, IEEE 1580

Mining Cables: IS 14494, **Co-Axial Cables:** MIL - DTL - 17H,

High Temperature / Aerospace Cables: JSS 51034, 51038, SAE-AS 22759 / 32A, 34B, 41B, 43B, 44A, 45A, 80D, 83E, 84E, 85E, 86E, 87E, 88E, 89E, 90D, 91D, 92D, ANSI / NEMA - WC - 27500, UL 13, UL 44, UL 1277, UL 2250.

Valuable Assets

- Over 5,00,000 sq ft of infrastructure facilities with latest technology
- 2250+ dedicated & high performing workforce
- Experienced & professional leadership team
- Offers technical support in cable selection through SAP





Electrical Submersible Pump (ESP) Cables

High, medium & low temperature flat & round cables are 3 KV, 4 KV & 5 KV rated for operating temperatures up to 450º F, 284º F, 205º F & 160º F.

Sizes : 1, 2, 4, 6 AWG & other sizes and KV ratings available upon request

Application : Downhole extraction systems are critical for crude oil extraction. The reliability of the electrical power supply to an Electrical Submersible Pump (ESP) system depends on the performance and reliability of the power feed through the wellhead, power cable, motor lead cable, pig tail connectors and related equipment such as the pump and motor. These cables offer an efficient, rugged and easy to handle solution that delivers reliable performance in a package that is straight forward to install and maintain

Construction :
- Solid or stranded plain or tinned copper conductor
- Proprietary PP / EPDM rubber insulation with a poly-adhesive layer to the conductor
- Lead Sheath (applicable only for SL.No 4,11 & 13 from the below table)
- HDPE / EPDM / Nitrile Rubber Jacket
- Longitudinally applied rubber backed fabric / Special heat resistant tape
- Galvanized steel / Stainless Steel / Monel armour

SL. No	Rated Temp. °F (°C)	Cable Construction	Voltage Rating KV	Conductor Size (AWG)	Conductor Coating	Insulation Material	Barrier Material	Tape	Jacket Material	Standard Armour
1	160(71)	Flat/Round	3,4,5	1,2,4,6	Bare/Tin	PP	NA	Rubber Backed Woven Fabric	HDPE	Galvanized
2	205(96)	Flat/Round	3,4,5	1,2,4,6	Bare/Tin	PP	NA	Rubber Backed Woven Fabric	EPDM	Galvanized
3	205(96)	Flat/Round	3,4,5	1,2,4,6	Bare/Tin	PP	NA	Rubber Backed Woven Fabric	Nitrile Rubber	Galvanized
4	250(121)	Flat/Round	3,4,5	1,2,4,6	Bare/Tin	PP	Lead Sheath	Rubber Backed Woven Fabric	Nitrile Rubber	Galvanized
5	250(121)	Flat/Round	3,4,5	1,2,4,6	Bare/Tin	PP	NA	Rubber Backed Woven Fabric	Nitrile Rubber	Galvanized
6	284(140)	Flat/Round	3,4,5	1,2,4,6	Bare/Tin	EPDM	NA	Rubber Backed Woven Fabric	Nitrile Rubber	Galvanized
7	284(140)	Flat/Round	3,4,5	1,2,4,6	Bare/Tin	EPDM	NA	Rubber Backed Woven Fabric	EPDM	Galvanized
8	300(148)	Flat/Round	3,4,5	1,2,4,6	Bare/Tin	EPDM	NA	Special Heat Resistant tape	EPDM	Galvanized
9	400(204)	Flat/Round	3,4,5	1,2,4,6	Bare	Polyimide Tape / EPDM	NA	Special Heat Resistant tape	EPDM	Galvanized
10	400(204)	Flat/Round	3,4,5	1,2,4,6	Bare	Polyimide Tape / EPDM	NA	Special Heat Resistant tape	EPDM	Galvanized
11	450(232)	Flat/Round	3,4,5	1,2,4,6	Bare	Polyimide Tape / EPDM	Lead Sheath	Special Heat Resistant tape	EPDM	Galvanized
12	450(232)	Flat/Round	3,4,5	1,2,4,6	Bare	Polyimide Tape / EPDM	NA	Special Heat Resistant tape	EPDM	Galvanized
13	450(232)	Flat/Round	4,5	1,2,4,6	Bare	Polyimide Tape / EPDM	Lead Sheath	Special Heat Resistant tape	EPDM	Monel

note : 1. Materials and specifications are subject to change without notice. 2. Jacket is not applicable for Flat cable construction



Downhole Tubing Encapsulated Conductor (TEC) Cables

These cables are used in the Oil and gas refineries, oil well monitoring, powering downhole equipment and instrumentation, Underground power distribution, pressure sensing equipment & data collection etc.

They are used to monitor, provide power and transmit signals in a downhole application. Cables used in the oil & gas industry must be able to withstand extreme environments, temperatures and pressure which is why Thermo Cables is the choice of industry professionals.

TEC (Tubing Encapsulated Conductor) cables have the traditional characteristics of stranded wires or cables – they have some form or copper conductor surrounded by an insulation material or jacket. The difference comes when the stranded wire or the tubing layer that surrounds the product with an armoured metal component. Lastly, the final layer encapsulates the entire cable. TEC tubing encapsulated cables can withstand temperature ranges from 150° C to 300° C.

These are made with 5 layers and can be constructed with the following materials:

Conductor Layer : can be comprised of 20 AWG to 12 AWG, solid or stranded, bare copper, tinned copper, nickel plated copper, or silver plated copper

Insulation Layer : can be comprised of either FEP, PFA, ETFE or ECTFE

Extruded Filler Layer : can be comprised of PFA, FEP or Polypropylene

Armour Layer : can be comprised of 316L Stainless Steel, Alloy 825 or Alloy 625

Final Layer : an encapsulation layer can be comprised of FEP, PFA, ETFE, Polyolefin or Polyamide

Shapes : either square or round

Cables Specification:

Voltage Rating V DC	1000	1000	1000	1000	1000	1000	1000	1000
Conductor Gauge (AWG)	18	16	18	16	18	16	18	16
Conductor Type	Solid or Stranded							
Conductor Coatings	Bare, Tinned, Nickel Plated, Silver Plated							
Insulation	ETFE, ECTFE, FEP, PFA							
Filler	Polypropylene, FEP, PFA							
Armour Type	316L (0.028" & 0.035") Alloy 825 (0.028" & 0.035")							
Max. Conductor Resistance Ohms / KFT 20° C	7	4.4	7	4.4	7	4.4	7	4.4
Max. Conductor Resistance Ohms / KFT 150° C	10.5	6.5	10.5	6.5	10.5	6.5	10.5	6.5
Capacitance pF / ft 20° C	26	27.2	32	29.3	26	27.2	32	29.3
Capacitance pF / ft 150° C	27.5	30.9	33.5	33.3	27.5	30.9	33.5	33.3
Min. Insulation Resistance Mohms / KFT	6500	15000	6500	15000	6500	15000	6500	15000
Encapsulation Cable Type	Polyolefin		Polyamide		FEP		PFA	
Encapsulation Cable Color	Yellow		Black		Natural			
Max. working temperature, degC (degF)	150 (302)				200 (392)		250 (482)	



Marine / Shipboard Cables

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

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

Standards	:	NES 526 - Dual layer Insulated, Electron Beam Cross linked irradiated Electric cables NES 527 - Fire Survival, High Temperature, Fire Retardant Halogen Free Sheathed Electron Beam Cross linked Irradiated Electric cables
Construction	:	Single Core, Multi Core, Multi Pair & Triad, Unscreened or Individually Screened or Collectively Screened
Voltage Grade	:	440 V AC
Conductor	:	Circular Electroplated, Annealed Tinned Copper
Temperature Range	:	-30^0 C to $+105^0$ C
Insulation	:	Dual Layer Electron Beam Cross linked irradiated materials / Silicon Rubber
Screening	:	Annealed Tinned Copper Braid
Outer Sheath	:	Electron Beam Cross linked irradiated LFH Compound
Protective Barrier	:	Glass Braid/Lacquer, Mica Glass Tape to meet the fire performance applicable for DEF STAN 02-527 (NES 527) cables

IEC 60092-350, 353, 360 & 376, BS-6883, BS-7917, NEK 606

For use in shipboard & offshore application at marine environment and use for Power, Control, Instrumentation and Communication with or without fire survival characteristics.

Standards	:	IEC 60092-350 - Construction & Test methods of Power, Control and Instrumentation Cables IEC 60092-353 - Power Cables for rated voltage of 0.6 / 1 KV, 1.8 / 3 KV. IEC 60092-376 - Control & Instrumentation Cables for rated voltage of 150 V / 250 V IEC 60092-360 - Insulating and sheathing properties materials for shipboard and offshore cables BS 6883 - Elastomeric insulated Cables for fixed wiring in ships & offshore nits BS 7917 - Elastomeric insulated fire resistant (Limited Circuit Integrity) Cables for fixed wiring in ships & offshore units
Construction	:	Single Core, Multi Core, Single Pair, Multi Pair, Multi Triad and Quad Screened & Unscreened, Armoured & Unarmoured
Voltage Grade	:	150 V / 250 V AC, 0.6 / 1.0 KV and 1.8 / 3.0 KV AC
Conductor	:	Electroplated Annealed Bare / Tinned Copper of various classes
Temperature Range	:	-15^0 C to 95^0 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 / SW2 / SW4 / SHF2 / SHF2 (Mud Resistant)
Braid Armour	:	Copper (Bare or Tinned) / Copper Alloy (Bare or Tinned) / Aluminium Wire / Bronze Wire / GI Wire Braid with $>$90% coverage.
Outer Sheath	:	SHF1 / SHF2 / SH / SF / SW2 / SW4 / SHF2 / SHF2 (Mud Resistant)



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

High Temperature / Heat Resistant 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, JSS, UL.)

Conductors : Annealed Bare copper (up to 200° C) / Annealed tinned copper conductor (up to 180° C)

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

Nickel plated conductor (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
ETFE	- 150° C to 150° C	Mechanically tough
XL ETFE	- 150° C to 200° 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
Special High Temperature Yarn	1000° C	Superior resistance to temperatures. excellent resistance against radiant heat.

Screening : Individual and / or overall with following options
- Aluminium Mylar / Copper Tape with Tinned Copper Drain Wire
- Braided 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, UL 13, UL 44, UL 1277, UL 758
AS 22759-32/34/41/43/44/45/80/83 to 88/91/92 & ANSI/NEMA WC 27500

Industry & Applications

Steel / Cement : Cables for blast furnace, electric arc furnace, hot & cold rolling mills, steel refining facilities etc.

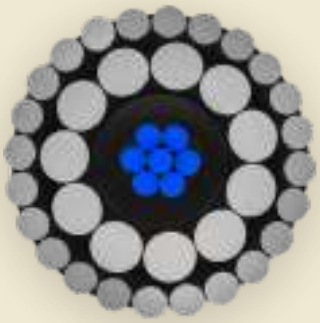
Communication : High frequency co-axial cables for VHF, UHF and SHF transmission

Marine : Engine proximity wiring for good resistance to high temperatures, fuel oils, chemicals, saline air / water etc.

Petrochemical : Instrumentation & control, temperature sensing, fire warning, ACWL (Aircraft Warning Light Cables), Ignition Cables etc.

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





Electromechanical Cables

These specialized heavy-duty cables are designed to provide both electrical power transmission and exceptional mechanical strength. They are primarily used in oil, gas, and mining industries to lower, power, and retrieve heavy subsurface tools and sensors, often operating at depths of several tens of thousands of feet.

Construction

Sizes : 14, 15, 16, 18 AWG & other sizes

Conductor : Solid or stranded, plain, tinned, or nickel-coated copper. Typically manufactured from high-purity copper, the central conductor serves as the primary pathway for transmitting electrical power to downhole logging tools while simultaneously carrying data signals from the tools back to the surface

These are manufactured in accordance with ASTM B355, Class 10 requirements. The nickel coating enhances the conductor's resistance to corrosion, oxidation, and high-temperature environments, making it particularly suitable for demanding downhole applications where long-term reliability and durability is critical

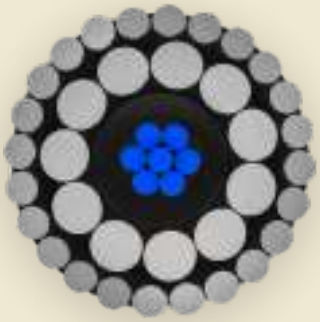
Insulation Layer : Specialized polymers such as PTFE , ETFE, or polypropylene are used to insulate the copper conductor. This insulation prevents electrical short circuits, provides excellent dielectric properties, and minimizes electrical capacitance between the conductor and the outer steel armour. They also offer superior resistance to high temperatures, chemicals, abrasion, and harsh operating conditions

Fillers : Filling Between Armour Layers: SUPERSEAL, a specialized pressure blocking and sealing compound is applied between the armour layers to prevent the migration of fluids and gases along the cable. This filling material enhances the cable's resistance to high pressure downhole environments, provides additional protection against moisture ingress, and helps maintain the structural integrity and reliability of the cable during operation

Armour Wires : The cable armour consists of high strength, corrosion and H_2S resistant alloy steel wires helically applied over the cable core in one or more counter rotating layers to provide the required tensile strength, mechanical protection, and torque balance during deployment and retrieval

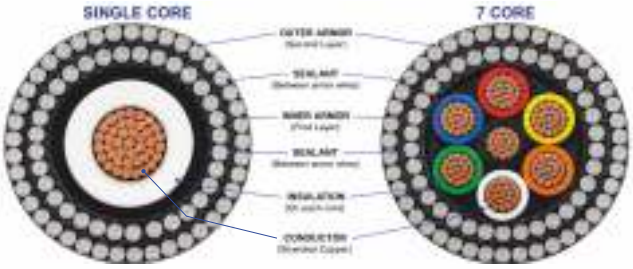
The armour wires are manufactured from premium grade corrosion resistant alloy steel specifically developed for service in high level H_2S (Hydrogen Sulphide) and CO_2 (Carbon Dioxide) well environments. The material offers excellent resistance to sulphide stress cracking (SSC), hydrogen embrittlement, CO_2 corrosion, abrasion, and cyclic fatigue while maintaining high tensile strength and flexibility under repeated bending over sheaves and drums







Electromechanical Cables



Cable Type Decoding :

Number of Conductors : 1 and 7

W : Armour wires (number of inner wires / number of outer wires) : 12 / 18

X : Armour wires (number of inner wires / number of outer wires) : 24 / 24

Y : Type of conductor: 6 wires around 1 central wire nickel plated

Z : Type of conductor: 12 wires around 6 wires around 1 wire nickel coated

Insulation : P: PFA, F: FEP, E: ETFE

Armour Material : NS - Nickel Stainless, ENS - Enhanced Nickel Stainless, CR - Corrosion Resistant

Size	Cable type	Temperature rating °C/F			Insulation	Insulation thickness mm	Conductor configuration mm	Number and Sizes of wires		Resistance Typical Ω/Km	Capacitance pf/m	OD Each mm	Cable breaking strength KN
		1 Hr. max temp	8 hr max temp	Const. max temp				Inner Armour mm	Outer Armour mm				
1C x 18AWG	1WYP-NS	260/500	232/450	204/400	PFA	0.775	7 x 0.404	12 x 0.787	18 x 0.787	22	141	2.743	20.9
1C x 18AWG	1WYP-ENS	260/500	232/450	204/400	PFA	0.775	7 x 0.404	12 x 0.787	18 x 0.787	22	141	2.743	21.8
1C x 18AWG	1WYP-CR	260/500	232/450	204/400	PFA	0.775	7 x 0.404	12 x 0.787	18 x 0.787	22	141	2.743	23.14
1C x 16AWG	1WZP-NS	260/500	232/450	204/400	PFA	0.813	19 x 0.302	12 x 0.909	18 x 0.909	15.1	174	3.124	26.7
1C x 16AWG	1WZP-ENS	260/500	232/450	204/400	PFA	0.813	19 x 0.302	12 x 0.909	18 x 0.909	15.1	174	3.124	29.8
1C x 15AWG	1WZF-NS	260/500	232/450	204/400	FEP	0.432	19 x 0.325	12 x 1.016	18 x 1.016	13.1	157	2.489	34.7
1C x 15AWG	1WZE-NS	260/500	232/450	204/400	ETFE	0.483	19 x 0.325	12 x 1.016	18 x 1.016	13.1	157	3.454	34.7
1C x 15AWG	1WZF-ENS	260/500	232/450	204/400	FEP	0.432	19 x 0.325	12 x 1.016	18 x 1.016	13.1	157	2.489	36
1C x 15AWG	1WZE-ENS	260/500	232/450	204/400	ETFE	0.483	19 x 0.325	12 x 1.016	18 x 1.016	13.1	157	3.454	36
1C x 14AWG	1WZF-NS	260/500	232/450	204/400	FEP	0.622	19 x 0.361	12 x 1.13	18 x 1.13	10.5	148	3.048	43.16
1C x 14AWG	1WZE-NS	260/500	232/450	204/400	ETFE	0.444	19 x 0.361	12 x 1.13	18 x 1.13	10.5	148	3.937	43.16
7C x 15AWG	7XZPP-ENS	260/500	232/450	204/400	PFA / PFA	0.737	19 x 0.325	24 X 0.991	24 X 1.257	36.4	131	2.438	85

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 mm^2

Voltage Grade : Up to 1000 V

Conductor : Bare Copper / Tinned Copper Stranded / Flexible Conductor

Primary Insulation : PVDF Fluoropolymer / ECTFE (Halar)

Outer Sheath : High molecular weight polyethylene (HMWPE)



Type P Cables

Type P Cables are specifically designed for installation and use in harsh environments found within offshore and onshore drilling rigs. These extreme environments may include severe cold, high heat, constant vibration, drilling mud, mechanical stress and salt corrosion.

Specification	:	IEEE 1580, IEC 60092-353, IEC 60092-376, UL 1309
Temperature Range	:	90^0 C, 100^0 C, 110^0 C & 125^0 C
Conductor	:	Flexible stranded tinned copper
Application	:	Powering Machinery, Communication Devices, Navigation Systems, Offshore Drilling Rigs, Shipboard Wiring and Marine Vessels
Cable Type	:	Multi Core, Single Core, Power, Control, VFD and Instrumentation Cables
Voltage Grade	:	300 V, 0.6 / 1.0 KV & 2 KV
Insulation	:	XLPO
Sheath	:	Extruded Flame Retardant, Oil & Abrasion Resistant Synthetic Elastomer
Armour (Optional)	:	Tinned copper or bronze wire braid
Shield (applicable for Instrumentation Cables)	:	An aluminium/polyester tape with drain wire, 100% coverage, is applied over each twisted pair and the cabled core, the single pair construction has only the overall shield



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 for noise generation, sudden induced voltage and spikes 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



Co-Axial Cables (RG Series)

Radio Frequency or Signal Transmission Cables, Polyethylene / XLPE / Flourpolymer / Dielectric Insulation & Halogen Free Flame retardant with low smoke and low toxic polymers, Sheath materials.

Specification	:	Def Stan 02-512 (PT-5) & MIL-DTL-17H & customer specification
Construction	:	Single Core Screened Cables
Primary Conductor	:	ABC / ATC / SPC & special conductors like CCS (Copper Clad Steel) etc
Temperature Range	:	- 30^0 C to +120^0 C
Insulation	:	Polyethylene / XLPE / Flouropolymer
Outer Conductor	:	Aluminium Mylar Tape / Annealed Tinned / Bare Copper Braid
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, RG188, RG 58, RG 59, RG 214
Application	:	For use of VHF (Very High Frequency) signal transmission

Product Certifications


DNV

CERTIFICATE OF CONFORMITY

This is to certify that the product(s)

Power, Control, Instrumentation & Thermocouple Cables

manufactured by

THERMO CABLES LTD.


DNV

TYPE APPROVAL CERTIFICATE

Thermo Cables Ltd


ABS

CERTIFICATE OF

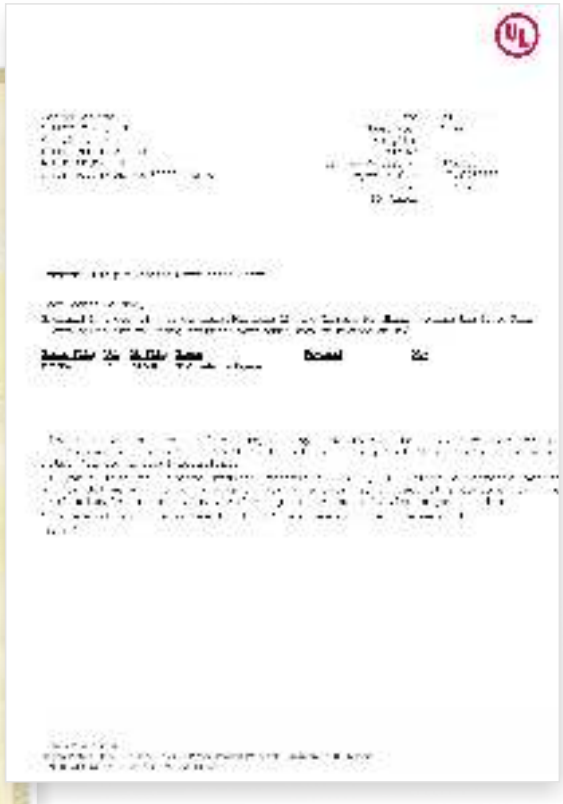
Product Design Assessment

THERMO CABLES LIMITED

PLOT NO. G1,G2(A&B), G9A, G9B AND G10, GREEN INDUSTRIAL PARK, JADCHERLA, DIST. MAHABUBNAGAR , MAHABUBNAGAR, TELANGANA, India, 509301

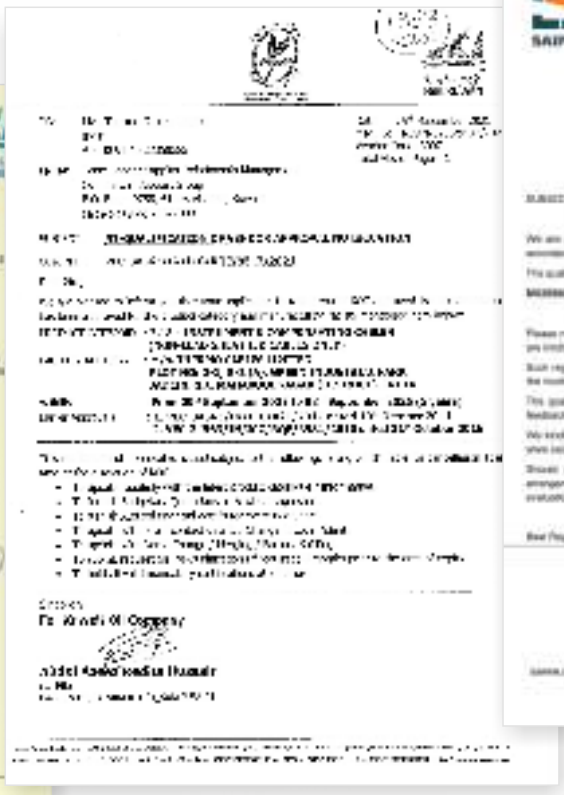

Type Approval Certificate


EAC


UL

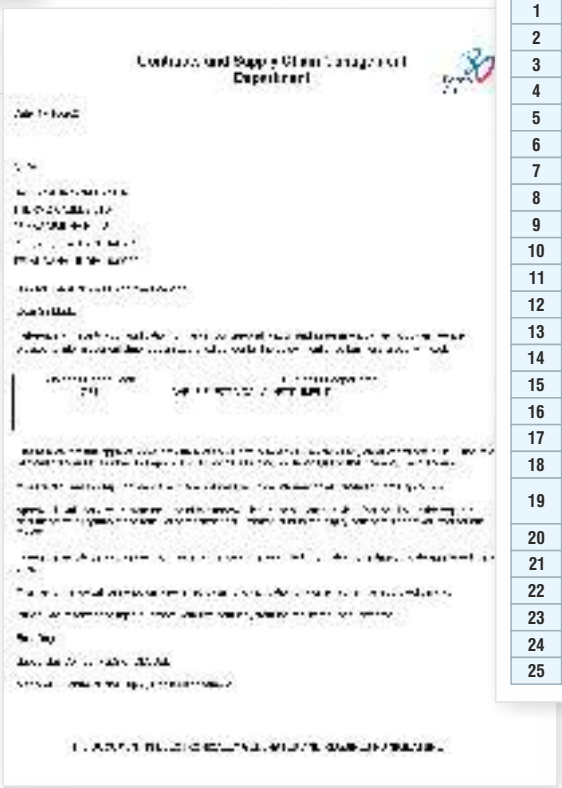
International Approvals





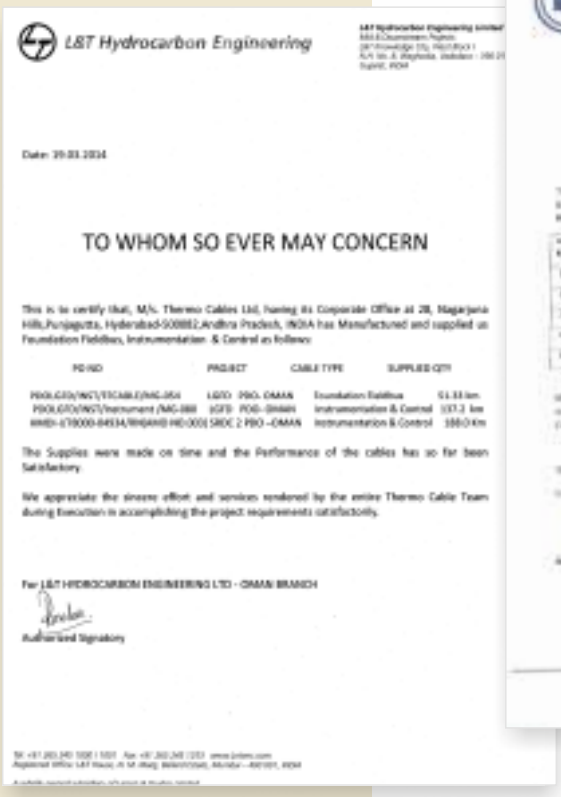






S.No	Customer	Vendor Code
1	ADNOC	20009092
2	Advance Petrochemical	201463
3	Aluminium Bahrain B.S.C. (ALBA)	7791
4	Borogue	000003394
5	Dolphin Energy Ltd	112792
6	Dry Docks	99393
7	Emirates National Oil Company (ENOC)	1001101538
8	ExxonMobil	PC-2024.091753
9	FARABI	9000403
10	GE	SQ-076734.2
11	KOCH Engineered Solutions	SPS000472
12	Kuwait National Petroleum Company (KNPC)	177128
13	Kuwait Oil Company (KOC)	30971
14	MAADEN	20230002
15	NEOM	S10764408
16	National Water Company (NWC)	40317
17	Petroleum Development Oman (PDO)	104158
18	Petronas	1125426A
19	PTT Exploration and Production Public Company Limited (PTTEP)	309104
20	Qatar Energy	309104
21	Qatar Fuel Additives Company Limited (QAFAC)	106712
22	Saudi Arabian Railway (SAR)	4895
23	Saudi Electricity Company	2012054
24	SIBUR	61293
25	TASNEE	S11312730

Accolades



L&T Hydrocarbon Engineering

Date: 29.03.2024

TO WHOM SO EVER MAY CONCERN

This is to certify that, M/s. Thermo Cables Ltd, having its Corporate Office at 2B, Nagarjuna Hills,Punjagutta, Hyderabad-500082,Andhra Pradesh, INDIA has Manufactured and supplied as Foundation Fieldbus, Instrumentation & Control as follows:

PO NO	PROJECT	CABLE TYPE	SUPPLIED QTY
PSOL/LTO/WCT/TTCABLE/IMC-054	LOTO PDO- OMAN	Foundation Fieldbus	51.33 km
PSOL/LTO/WCT/Instrument /IMC-080	LOTO PDO- OMAN	Instrumentation & Control	137.2 km
8MED-179000-84934/8MED0 HO 0001	SROC 2 PDO –OMAN	Instrumentation & Control	100.0 Km

The Supplies were made on time and the Performance of the cables has so far been Satisfactory.

We appreciate the sincere effort and services rendered by the entire Thermo Cable Team during Execution in accomplishing the project requirements satisfactorily.

For L&T HYDROCARBON ENGINEERING LTD - OMAN BRANCH

Authorised Signatory



Chennai Metro Rail Limited

TO Whomsoever It May Concern



NATIONAL CEMENT COMPANY LTD

Dated : 29.03.2019

TO WHOM SO EVER IT MAY CONCERN

This is to certify that M/s.Thermo Cables Ltd., Hyderabad have supplied LT Power, Control, Signal, Thermocouple and Composite Cables to our 3000 TPD Clinkerisation Unit at Hiroshi, Embl-Lukkiluk Road, Kajiado County, KENYA vide our PO No.NCCL/PRIJ/YML-DAE004/2014-2015 dated 9th November, 2015.

The PO contains supply of 15000 Mtrs of 3.5 C X 300 Sq mm alongside other type of Cables.

We appreciate Thermo Cables effort in executing this Order with quick deliveries to meet our Project Schedules. The Cables are in operation for more than 1 Years and the performance is found to be satisfactory.

for NATIONAL CEMENT COMPANY LTD.,

Name: Lokesh Kumar
Designation: Commercial Director
Seal



cpp

Date: 24 June 2015

To Whomsoever It May Concern

Subject: Performance Letter for Supply of Cables

This is to certify that Thermo Cables Limited, having its registered office at 2B, Nagarjuna Hills Punjagutta, Hyderabad, Telangana, India – 500082 has successfully supplied cables for our various projects over the past years.

Details of the major supply orders executed are as follows:

Project Name	Purchase Order No.	Year of Supply	Quantity Supplied	Description of Material Supplied
RAS MARKAZ CRUDE OIL PARK PROJECT - OTTCO	CPP-RM-PO-0117	2015/2023	306.31 KM	Instrumentation and Control Cables

Thermo Cables Limited has met all the technical and delivery requirements of the above projects and has demonstrated good performance in terms of quality, timely delivery, and support for Smooth Execution of the project.

We acknowledge their contribution and purchase endeavors and wish them all the best in their future endeavors.

For and on behalf of

China Petroleum Pipeline Engineering Company Limited - Middle East

Head of Procurement, CPP MEE

Address: 40th Floor, Addax Tower, Al Reem Island, Abu Dhabi, UAE



Abhiveerji Group

Date: 13.03.2014

TO WHOM SO EVER MAY CONCERN

This is to certify that, M/s. Thermo Cables Ltd, having its Corporate Office at 2B, Nagarjuna Hills, Punjagutta, Hyderabad-500082,Andhra Pradesh, INDIA has Manufactured and supplied as Foundation Fieldbus, FF Instrumentation & Control of 40Nos against our Purchase order PSOSC-LE/018 for Kuwait Company NEW GC 16 Project.

The Supplies were made on time and the Performance of the cables has so far been Satisfactory.

We appreciate the sincere effort and services rendered by the entire Thermo Cable Team during Execution in accomplishing the project requirements satisfactorily.

For Abhiveerji Group Company

Authorised Signatory



HITACHI
Inspire the Next

Subject: Letter of Appreciation to Thermo Cables Limited

To, Thermo Cables Limited
Hyderabad.

Dear Thermo Cables Team,

We extend our sincere gratitude for the exceptional support provided during the period of 2022-2023. As it was previous Thermo Cables Limited has played a pivotal role in the success of Hitachi Energy India Ltd, particularly in the manufacturing of different type of cables for GIS at our Vadodara facility.

Hitachi Energy India Limited is excited to explore further opportunities, providing the most competitive quotes for the entire cable range. Whether you're a regular customer or a new potential customer, we look forward to hearing from you soon.

As an esteem client of Hitachi

Hitachi Energy India Limited, Vadodara

Hitachi Energy

System Certifications

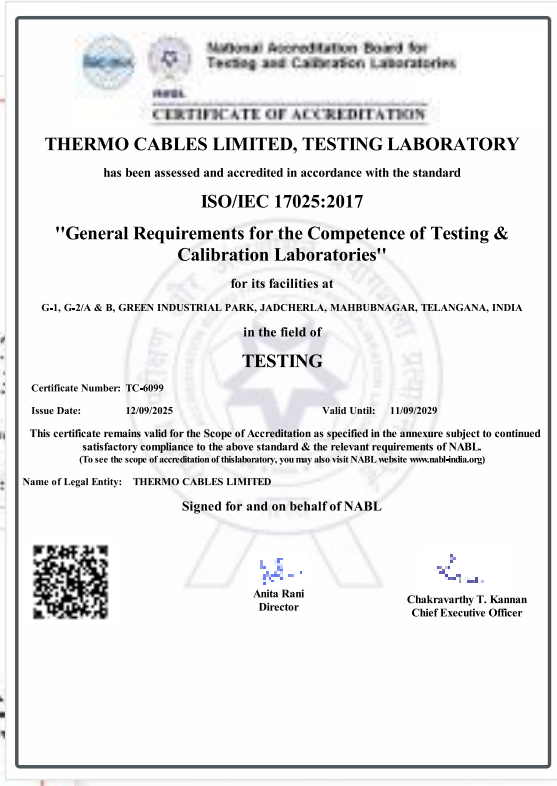












Infrastructure

Machinery

Name of the Machine	Name of the Machine
Rod Break Down Machine (9 Die)	HOIST 'H' - 48 Armouring - 2 Nos
Rod Break Down Machine (11 Die)	HOIST 'H' - 48 B Armouring - 2 Nos
Rod Break Down Machine (13 Die)	HOIST 'J' - 72 B Armouring
Skip Stranding Machine - 2 Nos	HOIST 'F' - 96 Armouring
Electroplating Tinning Machine - 2 Nos	HOIST 'K' - HV Area
Multi Wire Drawing Machine 30 mm	HOIST 'L' - Drum Twister Area
Multi Wire Drawing Machine 8 Wire - 2 Nos	HOIST 'O' - RBD Area
Fine Wire Drawing Machine - 4 Nos	HOIST 'I' - Despatch - 2 Nos
Mixing Machine 75 mm - 3 Nos	HOIST - MMH Area - 6 Nos
Kneader Line - 2 Nos	Chain Hoist 'A' - G I Rewinding - 2 Nos
75 L Kneader	Chain Hoist 'C' - Simon Taping - 4 Nos
Ring Marker	High Speed Bunching Machine - 10 Nos
High Speed Core Rewinding - 4 Nos	Chiller - 2 Nos
Taping Machine - 8 Nos	Chiller - 5 TR - 5 Nos
Vertical Taping Machine - 6 Nos	Chiller - 10 TR - 5 Nos
Horizontal Taping Machine - 12 Nos	Chiller - 20 TR
Single Twist Bunching Machine	PVC Mixer
400 Single Twist Bunching Machine	High Speed Mixer 60 kg
Tandem Extrusion Line (Ø50 + 65 / 35 mm)	High Speed Mixer 120 kg
Tandem Extruder Line (Ø80+ Ø100 / Ø35)	High Speed Mixer 200 kg
Tandem Extruder Line (Ø35+ Ø50 / Ø35)	16 A High Speed Braiding - 3 Nos
Extruder Machine 20 mm Bi Color	16 F High Speed Braiding - 2 Nos
Extruder Machine 45 mm	24 High Speed Braiding - 2 Nos
Extruder Machine 45 mm Bi Color	24 A High Speed Braiding - 5 Nos
Extruder Machine 65 mm - 9 Nos	24 E High Speed Braiding - 4 Nos
Extruder Machine 70 mm - 2 Nos	24 F High Speed Braiding
Extruder Machine 70 / 35 mm	48 High Speed Braiding
Extruder Machine 75 mm - 3 Nos	3 HP Air Compressor
Extruder Machine 80 mm - 4 Nos	10 HP Air Compressor - 3 Nos
Extruder Machine 100 mm	15 HP Air Compressor
Extruder Machine 120 mm - 2 Nos	20 HP Air Compressor - 2 Nos
Extruder Machine 150 mm	25 HP Air Compressor
Foam Extruder Machine	100 HP Air Compressor - 7 Nos
Core Rewinding Machine - 7 Nos	Brazing Machine - 4 Nos
Cooling Tower - 6 Nos	H V Testing - 3 Nos
High Speed GI Rewinding Machine - 27 Nos	Drum Twister Machine - 2 Nos
Ceramic Butt Welding Machine	630 Single Twister Machine 7 Bobbin
Butt Welding Machine - 15 Nos	800 Single Twister Machine 12 Bobbin
Electron Beam Accelerator - 2 Nos	1250 Single Twister Machine 19 Bobbin
Pairing Machine - 4 Nos	1050 Single Twister Machine
Pairing Back Twist Machine - 3 Nos	Pairing Back Twist Machine - 2 Nos
Laying Machine (7 Bobbins)	DT 500 & 800 Buncher Machine - 1 No & 5 Nos
Laying Machine (7 Bobbins) - Single Twist	Scissor Lift 2 ton
Laying Machine (13 Bobbins)	Steam Boiler
Laying Machine (19 Bobbins) - 4 Nos	PVC Grinder
Laying Machine (37 Bobbins) - 3 Nos	Hydraulic Press
Laying (42 Bobbin)	PT Stranding & Taping Machine
Armouring Machine (30 Bobbin) - 2 Nos	Vertical Taping Machine -18 Nos
Armouring Machine (40 Bobbin)	Silicon Rubber Mixing Machine
Armouring Machine (48 Bobbin) - 4 Nos	65/150 Two Stage Extruder (Compounding Line)
Armouring Machine (72 Bobbin) - 2 Nos	60 KVA UPS
Armouring Machine (96 Bobbin)	80 KVA UPS - 2 Nos
Extruder Sheathing Machine 80 mm - 2 Nos	100 KVA UPS
Extruder Sheathing Machine 100 mm	120 KVA UPS
Cable Rewinding Machine - 5 Nos	160 KVA UPS
GI Rewinding Strip Machine - 2 Nos	200 KVA UPS
Off Line Annealer	250 KVA UPS - 5 Nos
Nickel Plating - 2 Nos	320 KVA DG Set
Pointing Machine - 2 Nos	365 KVA DG Set
Fork Lift - 2 Nos	600 KVA DG Set
Auto Clave	1000 KVA DG Set
HOIST 'A' - Skip	Inkjet Printers - 36 Nos
HOIST 'B' - 54 Stranding	Laser Printers - 4 Nos
HOIST 'P' - Stores	EOT 15MT
HOIST 'C' - 7 B Laying	80 / 50 Insulation Line (High Speed)
HOIST 'E' - 13 Laying	Rubber Compound Line
HOIST 'E' - 19 Laying - 2 Nos	Electro Tin Plating
HOIST 'E' - 19 B Laying - 2 Nos	Multi Wire Drawing Machine (16 wire)
HOIST 'G' - 30 Armouring - 2 Nos	37 Bobbin Planetary Laying Machine
HOIST 'G' - 30 B Armouring	Interlock Armouring Machine
HOIST 'F' - 37 Laying	Induction Heating System
HOIST 'F' - 37 B Laying - 2 Nos	3150 Cable Rewinding Machine
HOIST 'K' - 40 Armouring	

Testing Equipment

Name of the Machine - Range/LC
Fourier Transmission infrared Spectrometer (FTIR)
Profile Projector
Digital Thermometer With Sensor - 2 Nos
Hot Air Ageing Oven
Hot Air Oven 6 Nos - Upto 250° C & 300° C
Hot Set Oven - 3 Nos
Ozone Resistance Test Equipment
Smoke Density Apparatus - 3 Nos
Oxygen & Temperature Index Apparatus - 2 Nos
Flammability Tester - 3 Nos
Cold Chamber Bend Cold Impact Test Set - 2 Nos 20° C to +25° C -30° C
Hot Set Test Apparatus - 3 Nos
Toxicity Index Test Equipment
Halogen Acid Gas Emission Test Apparatus
pH & Conductivity Test Equipment - 2 Nos - 0 to 14 pH
Abrasion Resistance Tester - 2 Nos
Electronic Tensile Tester - 3 Nos - 0 to 1000 N
Dielectric Breakdown Tester & Leakage Current Tester
High Frequency Spark Tester - 8 Nos - 0 to 15 KV AC
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.) & 1 mΩ to 1.9999 kΩ (1 No.)
H V Tester - 4 Nos - 0-5/10 KV
Million Mega Ohm Meter - 6 Nos - 1 MΩ to 100 GΩ, 1 MΩ to 50 TΩ & 2 MΩ to 20 GΩ
Digital L C R Q Meter
Thermal E M F Error Test Apparatus - 0 to 200 mV DC
Digital M V Source Cum Meter - 0 to 199.9° C
Digimatic Caliper - 0 to 300 mm
Acid Gas Generation Apparatus - 2 Nos
Swedish Chimney Test Equipment
Water Immersion Test Equipment - Upto 100° C
4 Cell Ageing Oven With Data Scanning Logger - 2 Nos - 16 Channels
Heating Oven - Upto 200° C
Thermal Stability Test Apparatus
Water Absorption Test Apparatus Gravimetric
Electronic Balance Weighing Machine 3 Nos - 0 to 180 gms 10 gms to 3 kgs
Kelvin Bridge - 0-11 Ω
Torsion Testing Machine (Digital Control Meter - Upto 99999 Count)
Fire Survival Test Equipment
Static Noise Rejection Ratio Meter - 60 to 100 dB
H V Break Down Tester - 0 to 2.5 KV DC
Transfer Impedance Tester
Steel Rule & Test Mandrel Set - 0 to 1 Metre
Condition Chamber - 2 Nos - 20° to 40° C (Temp.) & 40 to 80 RH
Insulation Resistance Tester - 0 to 1000 MΩ / 500 V
Hydro Meter - 4 Nos - 0.700 - 1.000 g/ml
Digital Stop Watch - 5 Nos - 0 - 24 hrs
Mutual Capacitance Meter - 1.999 nF - 1999.9 nF
Length Counter Meter - Upto 99999 mtr
Tear Resistance Die
Coating Thickness Measurement Meter
Digital Multimeter - 4 Nos - MΩ
Inductance Decade Box - 10 mH-10 H
Capacitance Decade Box - 10 pF-10 μF
Wet & Dry Thermometer - 2 Nos - -40° to + 50° C
Glass Thermometer - 5 Nos - -10° C to + 110° C & -10° to 250° C
Thermometer - 2 Nos - 195° C to 205° C
Digital Anemo Meter - 0 -45 m/s
Digital Thermo Hygrometer - 2 Nos - 0 to 95° C / 20 to 99% RH
Senior Double Kelvin Bridge
UV Radiation Test Apparatus
Notch Propagation Tester (Analog)
Water Bath (Size 120cm X 90cm X 60cm)
H V Probe Milimeter
Abrasion Resistance Tester
Dynamic Cut Through Tester
Cable Analyzer
Universal Testing Machine
PC Based Crosstalk Attentuation & Impedance Meter - Attenuation 0.1 to 20 dB, Cross talk (-40 to 100 dB), Impedance 199.9 Ω to 1.999 kΩ
Network Analyzer (AESA)
Fluke - DSX - 8000
Toxity Index Tester as per EN 45545-2
Step Load Tester
Bending Torsion Tester
Vibration Tester
Fluorine Content Test Equipment
Thermal Endurance Test Ovens - 12 Nos
Cable Harness Testers - 2 Nos
Melt Flow Index Testers - 2 Nos
A.C High Voltage Tester 0-8KV - 3 Nos
High Temperature Oven upto 400° C - 2 Nos
Pull Force Tester
Micro Scope (Terminal Analyzer with Software)
DC milli Volt Drop Test Equipment
Variable mA Current Source Tester
DC-20MHz Dual Trace Oscilloscope
Conduit Flexing Tester
Digital Compression Tester - 2 Nos
Mooney Viscometer
Dust Particle Counter (Light House)
Bulk Density Test Apparatus
Digital Million Megohm Meter with Volume Resistivity



OUR CUSTOMERS

Thermo Cables Ltd

An ISO 9001, 14001 & 45001 Certified Company

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Telangana, India +91 40 44429292 +91 40 23350583

info@thermocables.com; exports@thermocables.com

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Germany	+49 (0) 15124124557	exports@thermocables.com

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TCL/Br/05.03/26