

CABLES THAT EMPOWER



www.cmilimited.in



CMI Limited

AN ISO 9001, ISO 14001
& OHSAS 18001 COMPANY
CIN NO. L74899DL 1985PLC018031



CMI Energy India Pvt. Ltd.

(Formerly General Cable Energy India Pvt. Ltd.)
AN ISO 9001 COMPANY
CIN NO. U31300DL2006FTC152190
A wholly owned subsidiary of CMI Limited

WELCOME TO

C M I

CMI Limited, an ISO 9001, ISO 14001 & OHSAS 18001 accredited company, is engaged in the manufacturing of quality and value engineered cable products to meet the requirement of a wide range of customers. The company's product portfolio consists of products across different categories such as Extra High Voltage Cables, HT Aerial Bunched Cables, HT (PVC/XLPE), LT Cables(EPR/XLPE/PVC), LT Aerial Bunched Cables, Fire Survival Cables, Catenary & Contact wire for Railways, Indoor & Outdoor Railways Signalling Cables, Air field Lighting Cables, PTFE Cables, Balise Cables, Co-Axial Cables, LSZH/TPU Sheathed Control Cables, Control & Instrumentation Cables, PCM Cables, Profibus Cables, Quad Cables, PIJF Telecom Cables, Signalling Cables, Fire Alarm Cables, Data Cables, Telephone Cables, Rubber Cables, Submersible Cables, Overhead Conductors – AAC, AAAC, ACSR, and other Special Cables as per client requirements.

The company's Faridabad plant has a Research and Development facility to address needs of the ever-changing and rapidly evolving customer preferences. The company accomplishes its production with existing operations in Faridabad (Haryana) and has made acquisition in Baddi (Himachal Pradesh).

The company is in enviable position as a partner to sector such as - Space Research, Nuclear Power, Railways, Petrochemicals, Refineries, Computer & High Frequency Transmission, Telecom, Steel, Power, EPC etc.

POISED FOR GROWTH

We at CMI have grown consistently despite the challenging macroeconomic situation in the recent years reflecting our fundamental strength of resilience and dynamism.

CMI Group of Companies, headquartered at New Delhi, India is a leader in manufacturing of various types of cables that meet the requirements of wide spectrum of clients. With the successful acquisition of General Cables Energy India Pvt. Ltd. (GCE) a fully owned subsidiary of General Cable Corporation (GCC), a Fortune 500 company, CMI Limited, the leading BSE listed specialty cable manufacturing company & is equipped with Two state-of-art production facilities in Faridabad (NCR) and Baddi in Himachal Pradesh.



CMI is a leader in the development, design, manufacturing, marketing and distribution of Conductor, Cables & Wires such as EHV, HV, LV, Instrumentation etc. for market segments namely Railways, Oil & Gas, Petrochemical, Energy, Industrial, EPC, Power, Defence, Transmission & Distribution, Communication and Special Applications.

CMI offers products conforming to various specifications, including but not limited to IS, BS, IEC, IEEE, VDE, NFC, ASTM and other International standards covering wide array of cable products.

CMI has best-in-class research and development, testing and production facilities. The development of unique compounds designed and tested to meet specific needs and stringent specifications, differentiates 'CMI' make Cable from all others.

It is our inherent quality of constantly evaluating ourselves and implementing new measures that fortifies our strength. Due to this dynamism in thought and action, we have built a robust business model and we are continuously strengthening our growth capabilities and deepening our growth appetite.

WITH DIVERSITY AND INNOVATION

The relentless efforts by our engineers undeterred by failure and the stringent process that is followed in our R&D centre have resulted in development of number of unique cables meeting specific needs differentiating us from others.

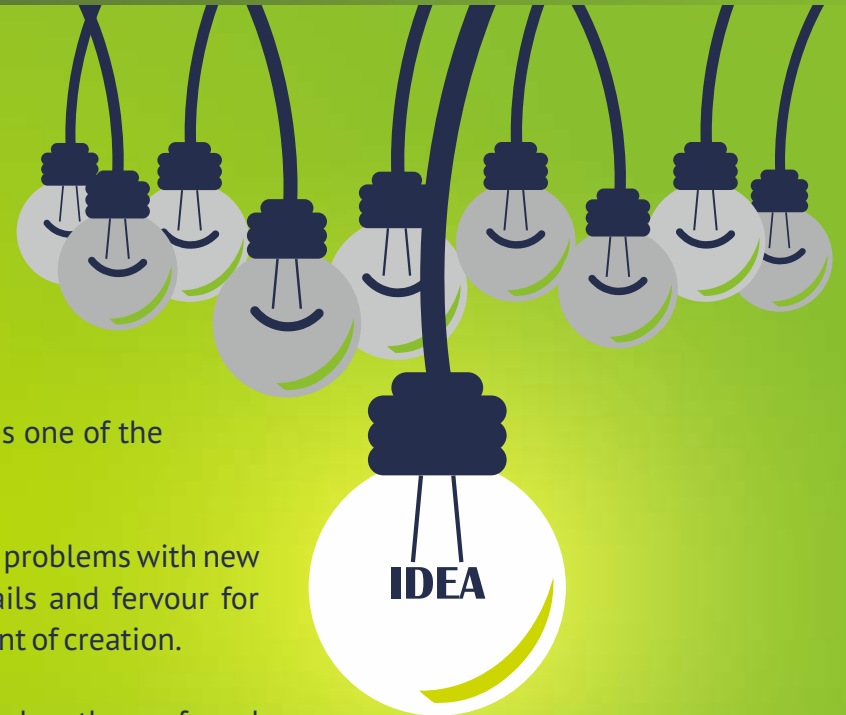
Diversity and Innovation has been the hallmark for CMI, establishing us as one of the leading players in the industry.

Innovation at CMI is about a commitment to address challenging customer problems with new solutions. Our in-depth knowledge of technologies, a keen eye for details and fervour for excellence have played the pivotal role in developing nurturing environment of creation.

Thanks to our commitment to diversity and innovation, we have emerged as the preferred vendor for many prestigious clients across industries. We are proud to be the sole supplier for Indian Space Research Organisation for specific cables used in Multi Object tracking system. We are one among 15 active vendors for Railways Signalling cables, 10 active vendors for Railway Power cables and 13 active vendors for PIJF quad cables to name a few. We are continuously supplying to various state utilities such as AVVNL, PuVVNL, DVVNL & MVVNL to name a few.

CMI is proud to have been associated with M/s IRCON Limited in execution of prestigious job of Railway Signalling of 27 stations in IRAN and have supplied all types of Signalling cables, Quad Cables having special design.

CMI has supplied the cables to various prestigious Clients and Projects in Bangladesh, Dubai, Germany, Myanmar, Qatar, Sharjah, Sri Lanka, Switzerland and United Kingdom.



HERE QUALITY IS CULTURE

CMI is insistent on giving our customers' quality in all aspects.

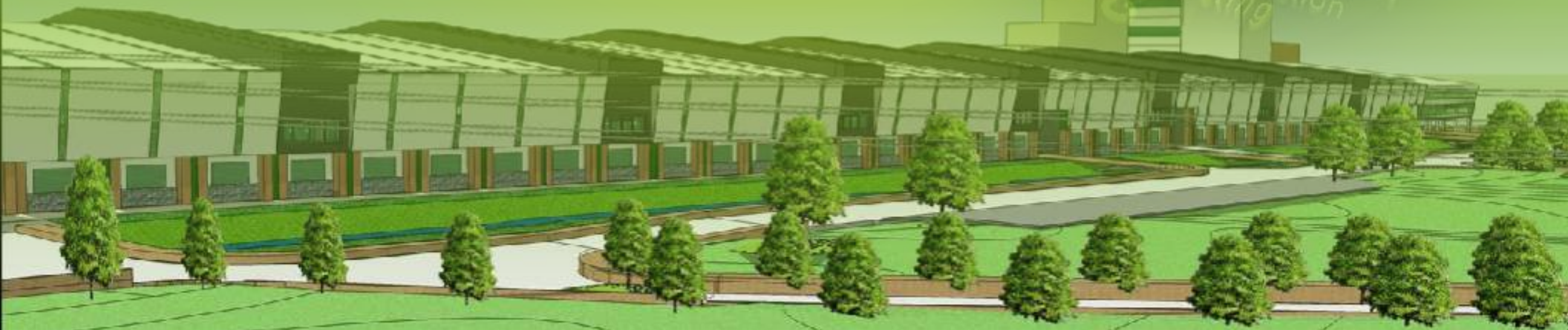
We strive to ensure this quality through extensive in-house and third-party testing, with strict adherence to our product specification and industry standards. At CMI, quality is a Culture. From designing the product-to-procuring best raw materials and controlling the quality of manufacturing – it is a Culture for us.

Our products and services have earned us a reputation of our customers' and suppliers' most valued business partner.

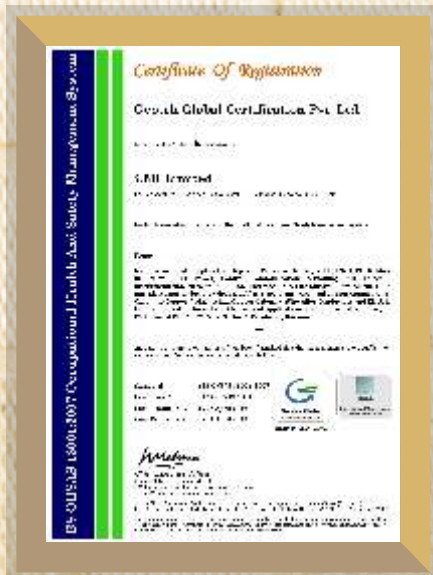


Aerial view of CMI Energy India Pvt. Ltd. Factory at Baddi, H.P., India

Quality Assurance Guaranteed



Certificates



GREEN BUILDING INITIATIVE

Our Green Initiative symbol recognizes our role and responsibility in promoting sustainability. The symbol also reflects our commitment to achieving industry-leading standards and responding proactively to environmental global issues.



India's First Green Cable Plant

Concept:

- *Reduced Effect on Environment*
- *Passive cooling*
- *Eliminate negative impacts on surroundings*
- *Reduce dependency on natural fuel reserves*
- *Reduce waste*
- *Increase in Productivity*

Benefits:

- *Energy Saving of 30-40%*
- *Water saving 20-30%*
- *Better quality of indoor air*
- *Natural Light & ventilation*
- *Recreation area & greenery*
- *More Efficiency*

SECTORS COVERED

DEFENCE



OIL & GAS



PETROCHEMICAL



SPACE & RESEARCH



RAILWAYS



MINING



TELECOM



POWER GENERATION,
TRANSMISSION & DISTRIBUTION



METRO



INFRASTRUCTURE



HEAVY INDUSTRIES



CMI

PRODUCT DIRECTORY

POWER & CONTROL CABLE

EHV POWER CABLE

66 to 132 kV Grade: Single Core, Stranded compact circular Aluminium/ Copper conductor, Conductor screened with Extruded semiconducting compound, XLPE Insulated, Insulation screened with Extruded semi-conducting compound, Semi-conducting water swellable tape, Concentric metallic screen, Poly-Al sheath/Metal sheath (Lead or Corrugated Aluminium), Graphite coated HDPE / PVC outer sheath conforming to IS 7088 (P-III) or IEC: 60840 & 62067 from sizes 185 sq.mm to 1200 sq.mm.



MV POWER CABLE

3.3 to 33 kV: Three/Single Core Copper/Aluminium Conductor, Conductor screened with Extruded Semi-conducting compound, Extruded XLPE Insulated, Insulation screened with Semi-conducting compound in combination with Copper tape, Extruded PVC ST-2 / FR / FRLS / LSZH inner Sheathed, Unarmoured/GI Steel (Aluminium in case of Single Core) flat/round wire armoured, and overall Extruded PVC ST-2 / FR / FRLS / LSZH Outer Sheathed cable conforming to IS: 7098 (P-II), IEC: 60502 (P-2)/BS: 6722 / BS: 7835 from 35 sq.mm to 1000 sq.mm.



MV AERIAL BUNCHED CABLES (ABC)

3.3 to 33 kV Grade: Extruded XLPE insulated, Aluminium conductors, Screened, Sheathed, cores laid together (twisted) around a bare/insulated messenger conductor of AAAC/ACSR from Single Core 70 sq.mm to 1000 sq.mm & Three Core 35 sq.mm up to 400 sq.mm generally as per IS: 7098 (P-2)/IEC: 60502 (P-2)/NFC Standard



LV POWER CABLE

Upto 1100 Volts Grade: Power Copper/Aluminium Cables, Solid/ Stranded conductor, Extruded PVC/XLPE Insulated, Cores laid-up, Extruded PVC ST-1/ST-2 (FR/FRLS/LSZH) inner sheath, Unarmoured/Armoured, Extruded PVC ST-1/ST2 (FR/FRLS/LSZH) Sheathed cables from 2.5 sq.mm to 1000 sq.mm and single / multi cores as per IS: 1554 (Part-1)/IS: 7098 (Part-1)/IEC: 60502 (P-1)/BS: 5467.



LT AERIAL BUNCHED CABLES (ABC)

Upto 1100 Volts Grade: Extruded XLPE (Black)/HDPE insulated Aluminium Conductors laid together (twisted) around Aluminium Alloy (AAC)/ACSR conductor insulated or bare messenger wire to form the Bunched Cable. Optional feature with neutral & street lighting conductor if and when required generally as per IS: 14255/IS: 7098 (P-1)/IEC: 60502 (P-1)/NFC Standard.



LV CONTROL CABLE

Upto 1100 Volts Grade: Control Copper cables, Solid/Stranded conductor, Extruded PVC/XLPE Insulated, Cores laid-up, Extruded PVC ST-1/ST-2 (FR/FRLS/LSZH) inner sheath, Unarmoured/Armoured, Extruded PVC ST-1/ST-2 (FR/FRLS/LSZH) Sheathed cables from 2 to 100 Cores x 1.5 and upto 4.0 sq.mm as per IS: 1554 (Part-1)/IS: 7098 (Part-1)/IEC: 60502-1/BS: 5467.



INSTRUMENTATION CABLE

INDIVIDUAL AND OVERALL SHIELDED CABLES

Stranded/ Solid (bare/tinned) Copper Conductor, Extruded PE/PVC/HR-PVC/XLPE Insulated each Pair/Triad laid up shielded individually with Mylar/Drain Wire/ Al-Mylar, All Pairs/Triads then laid up together overall shielded with Mylar/Drain Wire/Al-Mylar, Extruded PE/PVC (FR/FRLS)/LSZH Inner sheathed, Unarmoured/GI Steel round Wire/Strip/GI Steel Wire braided, Extruded HDPE/PVC (FR/FRLS)/LSZH Outer Sheathed from 1 Pair/Triad upto 61 Pair/Triad in sizes 0.5 sq.mm to 2.5 sq.mm generally as per BS EN: 50288-7/BS: 5308(P-1&2)/IEC: 60189/VDE: 0207



OVERALL SHIELDED CABLES

Stranded/Solid Copper Conductor, Extruded PE/PVC/HR-PVC/XLPE Insulated, Core/Pair/Triad/Quad laid up together overall shielded with Mylar/Drain Wire/Al-Mylar, Extruded PE/PVC (FR/FRLS)/LSZH Inner sheathed, Unarmoured/GI Steel round Wire/Strip/GI Steel Wire braided, Extruded HDPE/PVC (FR/FRLS)/LSZH Outer Sheathed from 2 upto 61 Core and 1 up to 61 Pairs/Triads/Quads in sizes 0.5 sq.mm to 2.5 sq.mm generally as per BS EN: 50288-7/BS: 5308(P-1&2)/IEC: 60189/VDE: 0207



COMPENSATING CABLES

Extension leads of different metals but having similar EMF output between 0°C to 100°C connected between Thermocouple metal junction and the measuring instruments are called compensating cables which are generally recommended as solid conductor leads.



THERMOCOUPLE EXTENSION CABLES

Different metal pairs generate different EMF which is proportionate to the hot junction and the point where it is measured. Common combination of thermocouple metals and their application are:

1. K-Chromel/Alumel-Most commonly used
2. T-Copper/Constantan-for-low temperature & cryogenic applications
3. J-Iron/constantan-highest EMF output
4. R-(Platinum-13% Rhodium)/Platinum & S-(Platinum-10 % Rhodium)/Platinum very high temperature measurements
5. B-(Platinum-30 % Rhodium)/ Platinum-mainly used in glass industries. different colour codes of cores and sheathing as per international practice are used to denote the various thermocouple cables.



RAILWAY SIGNALLING CABLES

INDOOR RAILWAY SIGNALLING CABLES

Solid/Stranded Copper conductor as per sizes given in Table 1 of IRS specification. Extruded PVC Type-A insulation, Colour coding as per Table no 3 of IRS Specification Polyester Tape, Extruded PVC type ST-1 sheathed as per IRS Specification IRS: 76/89

Application: These cables are used in indoor locations of control panels, circuits in switching yard for signalling and communication purpose. These cables are not suitable for direct buried applications



OUTDOOR RAILWAY SIGNALLING CABLES

Solid/Stranded Copper conductor as per sizes given in Table 1 of IRS specification. Extruded PVC Type-A insulation, Colour coding as per IRS Specification, Polyester Tape, Extruded PVC type ST-1 inner sheathed, Galvanized steel round wire/Double steel tape, Extruded PVC type ST-1 outer sheathed as per IRS Specification IRS: 63/2007

Application: For Outdoor & can be used in Underground locations



UNDER GROUND RAILWAY PIJF 4 & 6 QUAD 0.9 MM & 1.4 MM CABLES

Quad Jelly Filled cable 0.9 mm & 1.4 mm diameter, Aluminium Sheathed Metallic armoured as per Specification No. IRS:TC-30/05 with latest amendment.



UNDER GROUND RAILWAY PIJF TELEPHONE CABLES

Underground Polythene Insulated Jelly Filled cable with Poly-Al. Moisture Barrier Armoured Telephone Cable as per IRS 41/97 with latest amendment.



RAILWAYS POWER CABLE.

Supply of Power Cable, PVC Insulated Single Core Multi Stranded with plain annealed copper conductor as per IRS: S-76/89 Amendment-3, Copper Cable of 6 sq.mm for wiring in track circuit battery location box Red & Black Colour.



CATENARY & CONTACT WIRE

This Product offers the highest commercial-grade conductivity, good corrosion resistance, and good wear characteristics, Trolley wires or Contact wires is a single conductor, solid copper, having a hard drawn temper, with different profiles and sections and it is offered according to all major specification (ASTM, RDSO, DIN, NFC, BSS etc)

- 107 sq.mm HDGC Contact wire as per RDSO Specification No ETI/OHE/76 (6/97)
 - 65 sq.mm (19/2.10 mm) Stranded Cadmium Copper Catenary wire as per RDSO Spec No ETI/OHE/50 (6/97)
-



CONDUCTOR

ALL ALUMINIUM CONDUCTOR (AAC)

All Aluminium Conductor (AAC): is made up of one or more strands of hard drawn Aluminium Wires. The EC grade Alloy Conductor has a minimum conductivity of 61.2% IACS.

FEATURES:

- High current carrying capacity
- Suitable for low and medium voltage lines in urban area Excellent resistance to corrosion
- Ideal for use in coastal area
-

REFERENCE STANDARD: ASTM B 231-78, BS: 215 P-1, IS: 398 P-1, DIN: 48201



ALUMINIUM CONDUCTOR STEEL REINFORCED (ACSR)

Aluminium Conductor Steel Reinforced (ACSR): These are concentrically stranded conductor with one or more layers of hard drawn Aluminium wire on galvanized steel wire core which are coated with zinc with Class A Coating. The core can be single wire or stranded depending on the size of the conductors.

FEATURES:

- High Tensile strength
- Better sag properties
- Economic design
- Suitable for remote applications involving long spans

REFERENCE STANDARD: IEC: 1089 (TYPE A1/S1 B, A1/S2A, A1/S2B, A1/S3A), CSA C-49, ASTM B-232M, DIN: 48204, SS 424 0807, IS: 398 P-5, IS: 398 P-2



High Temperature Low Sag conductors (ACSS/HTLS)

Aluminium Conductor Steel Supported (ACSS and ACSS/TW): is constructed of fully annealed Aluminium wires formed into a Round or trapezoidal shape. The Aluminium wires are stranded around a steel core of seven or more wires as described in ASTM B-856 & ASTM B-857. ACSS & ACSS/TW can be designed with both equal area or equal diameter, compared to conventional round stranded conductors, to optimize line design options.

FEATURES:

The improved conductor can operate continuously at temperatures up to 250°C without loss of strength; its sag is less than that of conventional composite conductors; final sags are not affected by creep; it has excellent self-damping characteristics.



All Aluminium Alloy Conductors (AAAC)

These are made out of high strength Aluminium-Magnesium-Silicon alloy. As compared to conventional ACSR, AAAC are of lighter weight, comparable strength & current carrying capacity, lower electrical losses and superior corrosion resistance, This has given AAAC a wide acceptance in the distribution and transmission lines.. This conductor has a minimum conductivity of 52.5% IACS

FEATURES:

- High strength to weight ratio
- Better sag characteristics
- Improved electrical properties
- Excellent resistance to corrosion.



REFERENCE STANDARD: ASTM B 231-78, BS: 215 P-1, IS: 398 P-1, DIN: 48201

INDUSTRIAL / FLEXIBLE & HOUSE WIRES

*Energy efficient Wires ranging from 0.50 sq.mm to 1000 sq. mm in class
5 Copper conductors with different insulation properties upto 1100 Volts.*

PVC

Single core multi-Stranded copper conductor, PVC Insulated Wires



FR-FLAME RETARDANT

Single Core Multi-Stranded Copper conductor, FR PVC Insulated Wires with excellent Flame Retardant properties.



FRLS- FLAME RETARDANT LOW SMOKE

Single Core Multi-Stranded Copper conductor, FRLS PVC Insulated Wires with excellent Flame Retardant and Low Smoke properties.



HRFR-HEAT RESISTANT FLAME RETARDANT

Single Core Multi-Stranded Copper conductor, HRFR PVC Insulated Wires with Heat Resistant and excellent Flame Retardant properties.



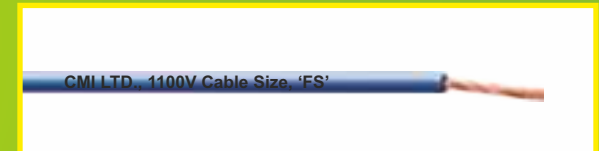
HR-HEAT RESISTANT

Single Core Multi-Stranded Copper conductor, HR PVC Insulated Wires with Heat Resistant properties.



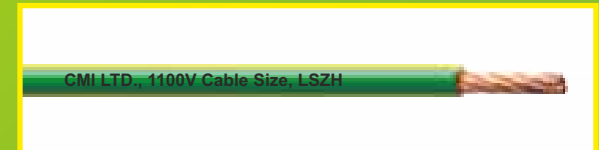
FRFS-FLAME RETARDANT FIRE SURVIVAL

Single core Multi-Stranded Copper conductor, Glass Mica taped insulated with special compound having excellent Flame Retardant and Low Smoke properties with continuous circuit integrity in case of fire.



FRZH-FLAME RETARDANT ZERO HALOGEN

Single Core Multi-Stranded Copper conductor, FRZH (special compound) insulated with excellent Flame Retardant Low Smoke and Zero Halogen properties having ROHS compliance.



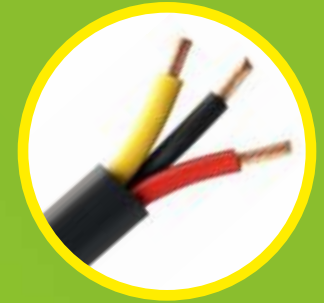
FRLF- FLAME RETARDANT LEAD FREE

Single Core Multi-Stranded Copper conductor, FRLF Lead Free PVC insulated With excellent Flame Retardant properties having ROHS compliance supporting Green revolution.



MULTI CORE INDUSTRIAL FLEXIBLE CABLES

2 Core to 61 Core x 0.50 sq.mm to 4 sq.mm, 2 Core to 4 Core from 6 sq.mm to 120 sq.mm in class 5 copper conductors with different insulation and sheathing properties.



SUBMERSIBLE FLAT AND ROUND CABLES

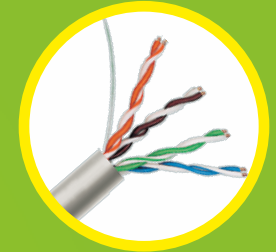
- Flat: 3 Core x 1.5 sq.mm to 95 sq.mm, Round: 3 Core and 4 Core x 1.5 sq.mm to 120 sq.mm in class 5 copper conductor with PVC/XLPE Insulation and PVC/PVC ST2 sheathing properties.
- Single Solid Copper Conductor from 0.6 to 3.0 mm wrapped with Superior Grade HR grade BOPP tape with High Abrasion resistance.



TELECOM CABLE

TELEPHONE CABLES

Range: 1 Pair to 100 Pair x 0.40 mm, 0.50 mm and 0.63 mm in solid conductor with HDPE Insulation and Flame Retardant Jacketing having lower case talk and attenuation.



JELLY – FILLED TELEPHONE CABLES

Solid annealed copper, polythene insulates, petroleum jelly filled with Poly-Al laminate moisture barrier, polythene sheathed, unarmoured/armoured polythene jacketed as per DOT/CMI specification.



RUBBER CABLES

Range: 1C to 61 cores from 0.50 sq.mm upto 2.5 sq.mm and sizes 0.50 sq.mm to 630 sq.mm-Annealed tinned Copper conductor- Class 5, Melinex taped Ethylene Propylene Rubber/Silicon insulated, Polychloroprene HDHOFr PCP/CSP/Silicon rubber sheathed 1.1 kV grade, fire retardant, oil and ozone resistant, heat resistant, rubber cables conforming to IS 9968 Part-1 :1988.

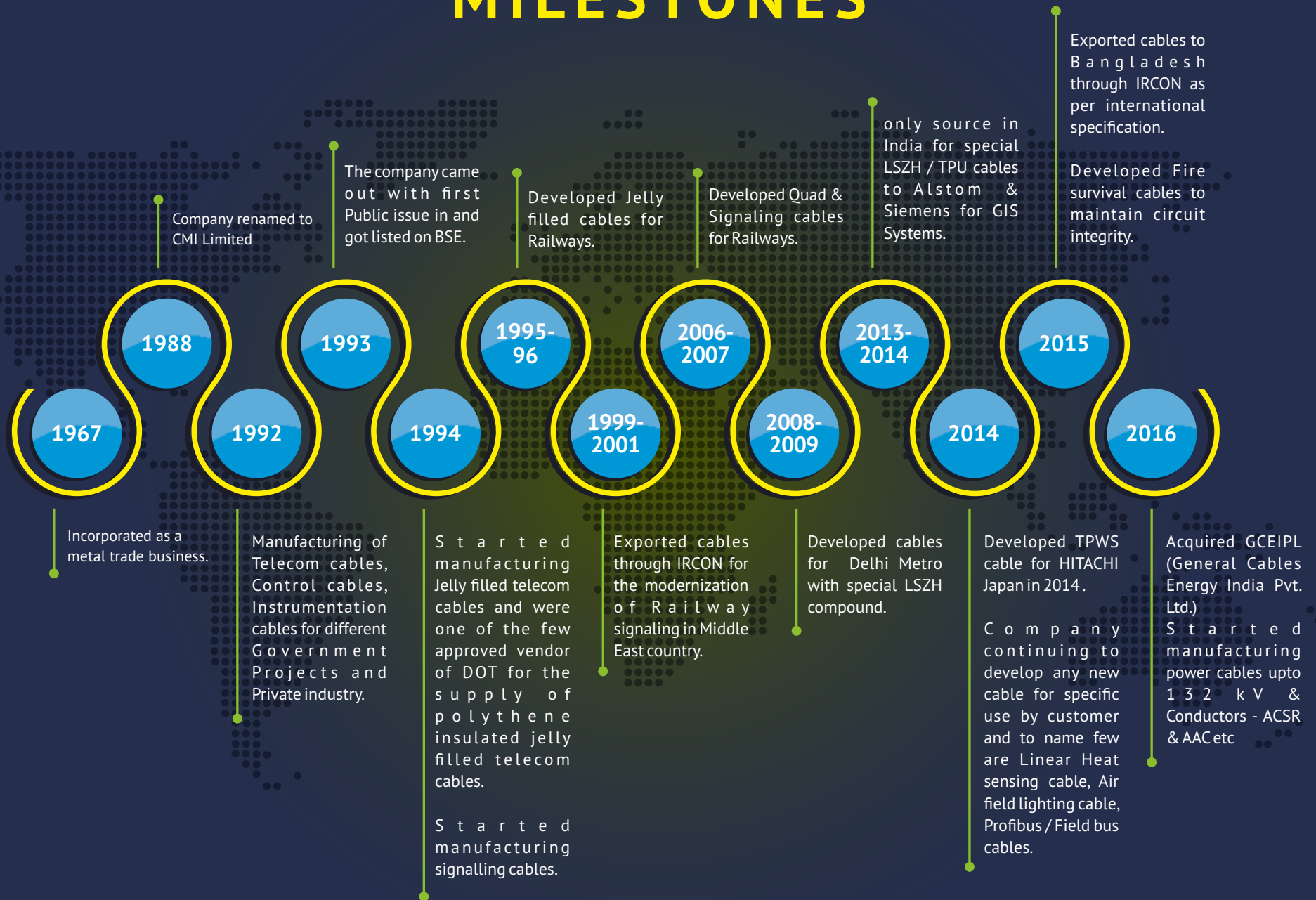


SPECIAL CABLES

Suited for various application such as :

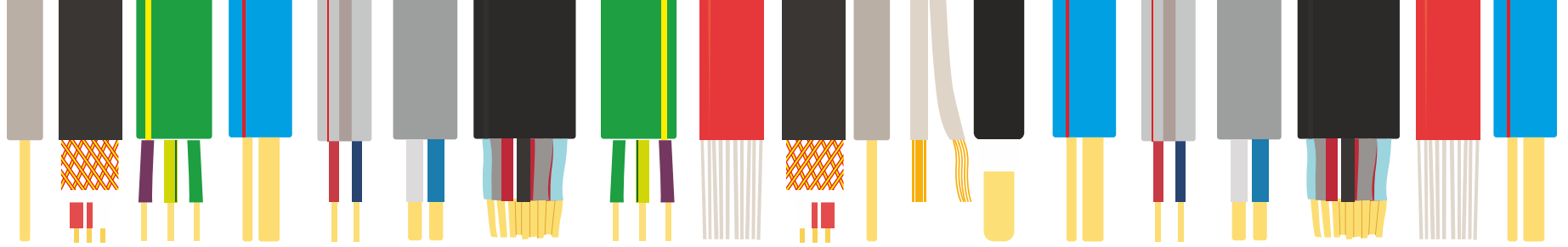
- # **MARINE, OIL & GAS (OFFSHORE ONSHORE)**
- # **HIGHLY CORROSIVE ENVIRONMENT**
- # **ANTI-THEFT CABLE**
- # **FIRE SURVIVAL CABLE**
- # **EXTREME FIRE CONDITIONS**
- # **AIRFIELD LIGHTING CABLE**
- # **VVF CABLE**

MILESTONES



OUR MAJOR CUSTOMERS

 PSPCL	 BHEL	 ABB	 KER MAAX	 metro Mumbai Metro Rail Corporation Limited		 NBSCOM	 ALSTOM	
 MADHYA PRADESH ELECTRICITY SUPPLY CORPORATION	 Technip	 सेल SAI	 Tamil Nadu State Electricity Board	 BSNL Communications India		 EIL	 itcon	 Uhde ThyssenKrupp
 MADHYA PRADESH STATE POWER CORPORATION LIMITED	 TATA MOTORS	 GAIL	 GETCO	 GUJARAT STATE FERTILIZERS & CHEMICALS LTD. An ISO Certified Company		 Hutch	 एनटीपीसी NTPC NATIONAL THERMAL POWER CORP. LTD	 LPSC Grenoble
 CENTRAL BOARD OF SECONDARY EDUCATION	 TATA STEEL	 HP	 IndianOil		 IFFCO	 IFFCO	 HFCL INFOTEL LTD	 भारत इलेक्ट्रॉनिक्स BHARAT ELECTRONICS
 MADHYA PRADESH STATE ELECTRICITY BOARD	 SYNERGY INERA	 APTEL	 KR Kerala Railway	 L&T	 TATA	 THE LINDE GROUP	 TVNL	 DG MAP In Pursuit of Excellence
 ERL	 TCL	 VIZAG STEEL	 ISRO	 इसरो ISRO	 SAIL	 MOTOROLA	 ELECTRICAL CONSULTING ENGINEERS	 KALINDEE RAIL NIRMAN (ENGINEERS) LIMITED
 ESSAR	 Global Toyo	 VIZAG STEEL Pride of Steel	 SIEMENS	 SIEMENS	 SIEMENS	 SIEMENS	 HFCL INFOTEL LTD	 MAHAVITARAN Maharashtra State Electricity Board Co. Ltd.



(A 100% subsidiary of General Cable, USA - (A fortune 500 company))



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