



Plant & Petrochem Cables



Application

All chemical, petrochemical, power or industrial plants require complex, integrated power, control and instrumentation systems.

Prysmian's **Technergy™** Plant and Petrochemical is a single stop shopping point for all your Power and Communication Network cabling needs for harsh and demanding Plant and Petrochemical environments.

Prysmian is a registered supplier for many end users (e.g. public utilities, oil companies, and petrochemical industries).

Benefits

> Technical Competence

Prysmian's product line is the result of more than 100 years of international experience with end users, contractors and engineers in all sectors.

Prysmian's know-how is derived from our own international Research and Development network, advanced innovation activities, R&D expenditure greater than 3% of our annual turnover, collaboration with universities and external experts and close cooperation with our customers.

> Comprehensive Range and Specifications

The **Technergy™** Plant and Petrochemical product line covers all plant industry cable and service requirements.

This product range includes MV, LV, Control, Instrumentation and Telecommunications cables and Accessories.

Technergy™ Plant and Petrochemical complies with the most recognised International and National standards (e.g. VDE, IEC, BS, AS, IEEE, UL, etc.).

> Product Innovation: Lighter, Smaller, Safer

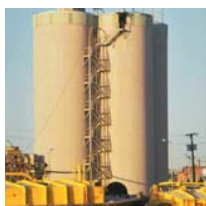
Technergy™ Plant and Petrochemical product line includes:

DRYLAM™: a special solution for critical environments, with a resistance to hydrocarbons and moisture that allows weight reduction (~60%), reduced diameters (~20%) and shorter installation times (~30%) compared with standard lead-sheathed cable designs.

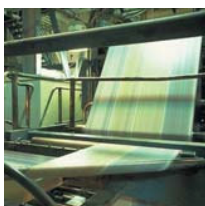
AIRBAG™: a revolutionary system that offers increased mechanical protection, lighter weight, improved flexibility and shorter installation times compared with traditional armoured cables.



Fossil fuel



Cement



Pulp and paper



Waste treatment



Water treatment

EVERYTHING YOU NEED ... WHEN YOU NEED

AIR BAG™ CABLE SYSTEM

Revolutionary Polymeric Shock Absorption System.

DRYLAM® SHEATHING SYSTEM

Chemical & Moisture protection for critical environments.



SAFETY LINE™

The ultimate answer to fire hazards.

Afumex®

The safe choice against smoke emissions.

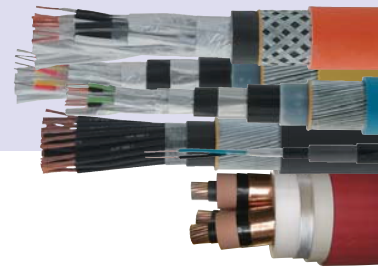


Ecology Line™

Solutions for environmentally friendly applications.

Our broad experience as a supplier to the Hydrocarbon Processing Industry and Power Plant worldwide projects makes us a reliable partner for any key player operating in major projects.

Technergy™ Plant and Petrochemical offers utilities, specifiers, contractors, system designers and installers the following benefits:



> **Close to Customers and End-Users**

With a number of dedicated production sites worldwide and an extensive network of sales offices, agents and representatives we guarantee fast, reliable and competent response to all customer needs.

Logistics advantages offer shorter lead times and reduction of logistics cost.

Our Worldwide Excellence Center helpdesk puts our customers in touch with the nearest Prysmian sales contact.

> **Safer in the Event of Fire**

AFUMEX™, is applicable to any product family. It provides greater safety in the event of fire, reducing fire propagation and the effects of smoke and corrosive gas emissions. These materials are also environmentally friendly (halogen-free, disposable and recyclable).

When system design requires circuit integrity in the event of fire, the **Technergy™** Plant and Petrochemical product line provides FP 100/200/400/1000, RF 31 22, Sienopyr, etc: all of which exceed the most demanding standards for fire resistant cables.

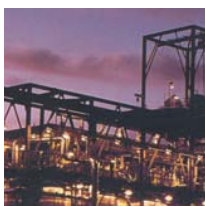
> **Contract Management**

Central co-ordination and a network of Prysmian technically skilled sales offices provide our Customers with local and easy to reach points of contact.

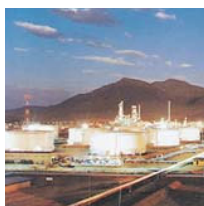
The multinational manufacturing presence of Prysmian and our sophisticated production planning methods guarantee sufficient production capacity even for large and long-term projects.

The highly sophisticated IT systems implemented in all the manufacturing sites provide real time order processing and tracking.

Full sets of project documentation (data sheets, drawings, certificates, manuals, etc) are provided within the standard scope of supply.



Chemical



Refinery



Fertilizer



Steel



Hydroelectric

About us

Prysmian Cables & Systems is a world-class multinational company. Founded in 1872 as "Ditta Pirelli & C.", it has achieved a leading position for more than a century of operations in its two key international markets - "Energy Cables & Systems" and "Telecom Cables & Systems".

Prysmian Cables and Systems is the world's largest manufacturer of power and telecommunications cables, with 52 manufacturing facilities in 21 countries in five continents and a market share in excess of 10%.

Prysmian Energy Cables and Systems is a global solutions provider, offering a wide range of integrated solutions, such as cable systems, system design and engineering, project management, installation and post-sale services.

Prysmian Energy Cables and Systems concentrates on continuous product innovation and on achieving a competitive edge by focusing on research and development. This is done through Prysmian's own R&D centres and by co-operating with universities, scientific institutions and above all, our customers. Prysmian's world-wide organisation makes and delivers advanced technological solutions to customers anywhere in the world.



Prysmian's TECHNERGY integrated cabling solutions™ is one of the world's most comprehensive and technologically advanced answers to industry, infrastructure, contractors and OEM's specific requirements.

TECHNERGY integrated cabling solutions™ are designed and structured into twelve different product lines. Each of these offer tailored designs and added value solutions to the most diverse functional and environmental requirements in the following fields:

- > Trains
- > Marine
- > Oil & Gas
- > Plant & Petrochem
- > Mining & Tunnelling
- > Defence
- > Cranes & Mobile Equipments
- > Electro-Mechanical
- > Data & Communication
- > Transportation Infrastructures
- > Building & Civil Engineering
- > Power Plants

To find out more about the TECHNERGY integrated cabling solutions™, Prysmian Cables and Systems invites you to visit the web site: www.prysmian.com



Cable families at a glance

- > **TEPLA I – Instrumentation and TEPLA T – Thermocouple Extension – Cable (*)**
I: cable for digital and analogue signal in measurement and process control.
T: extension thermocouple lead.

Product Family	General Description	Use & Installation
TEPLA I/T – O	Overall screened unarmoured 300/500V multipair/trial/quad instrumentation cables	Control room interconnection and general indoor use
TEPLA I/T – OA	Overall screened Armoured 300/500V multipair/trial/quad instrumentation cables	For direct burial and above ground, cable tray installation
TEPLA I/T – IO	Individual pair screened Overall screened unarmoured 300/500V multipair/trial/quad instrumentation cables	Control room interconnection and general indoor use
TEPLA I/T – IOA	Individual pair screened Overall screened Armoured 300/500V multipair/trial/quad instrumentation cables	For direct burial and above ground, cable tray installation
TEPLA I/T – ODA	Overall screened Drylam sheathed (**) Armoured 300/500V multipair/trial/quad instrumentation cables	For direct burial installation in direct and continuous contact with hydrocarbons, acids and bases
TEPLA I/T – IODA	Individual pair screened Overall screened Drylam sheathed (**) Armoured 300/500V multipair/trial/quad instrumentation cables	For direct burial installation in direct and continuous contact with hydrocarbons, acids and bases
TEPLA I/T FR	Fire Resistant 300/500V multipair/trial/quad instrumentation cables with all options indicated above	Fire hazard security circuits in control room interconnection and general indoor use

- > **TEPLA C – Multicore Control cables**
Contacts for control circuits, relay, shutdown, alarm and solenoid valves and instrument power supply.

Product Family	General Description	Use & Installation
TEPLA C	0.6/1kV unarmoured multicore control cable	Control room interconnection and general indoor use
TEPLA C – S	Screened unarmoured 0.6/1kV multicore control cable	Control room interconnection and general indoor use with EMC requirements
TEPLA C – A	Armoured 0.6/1kV multicore control cable	For direct burial and above ground, cable tray installation
TEPLA C – SA	Screened Armoured 0.6/1kV multicore control cable	For direct burial and above ground, cable tray installation with EMC requirements
TEPLA C – DA	Drylam sheathed (**) Armoured 0.6/1kV multicore control cable	For direct burial installation in direct and continuous contact with hydrocarbons, acids and bases
TEPLA C – SDA	Screened Drylam sheathed (**) Armoured 0.6/1kV multicore control cable	For direct burial installation in direct and continuous contact with hydrocarbons, acids and bases with EMC requirements
TEPLA C/FR	Fire Resistant 0.6/1kV multicore control cable with all options indicated above	Fire hazard security circuits in control room interconnection and general indoor use

(*) 0.6/1kV voltage rating available for installation adjacent to power cables - (**) Drylam sheathing system is Prysmian innovative and valuable alternative to lead sheathed cables. All cables are available with hydrocarbon resistant PVC/LSOH sheath.

> TEPLA L – Low Voltage Power Cables
Low Voltage power supply for engines, lighting and heating equipment.

Product Family	General Description	Use & Installation
TEPLA L	0.6/1kV unarmoured power cables	For general indoor installation
TEPLA L – S	Screened 0.6/1kV power cables	For general indoor installation with additional earthing and EMC requirements
TEPLA L – A	Armoured 0.6/1kV power cables	For direct burial and above ground, cable tray installation
TEPLA L – SA	Screened Armoured 0.6/1kV power cables	For direct burial and above ground, cable tray installation with additional earthing and EMC requirements
TEPLA L – LA	Lead sheathed Armoured 0.6/1kV power cables	For direct burial installation in direct and continuous contact with hydrocarbons, acids and bases
TEPLA L – SLA	Screened Lead sheathed Armoured 0.6/1kV power cables	For direct burial installation in direct and continuous contact with hydrocarbons, acids and bases with additional earthing and EMC requirements
TEPLA L/FR	Fire Resistant 0.6/1kV power cables with all options indicated above	Fire hazard security circuits in general indoor use

> TEPLA M – Medium Voltage Cables
Medium Voltage power transmission and supply.

Product Family	General Description	Use & Installation
TEPLA M	3.6/6 through 18/30 kV power cables	General indoor and outdoor protected installation
TEPLA M – S	Screened 3.6/6 through 18/30 kV power cables	General indoor and outdoor protected installation with EMC requirements
TEPLA M – SA	Screened Armoured 3.6/6 through 18/30 kV power cables	Direct burial installation and/or high mechanical shock risk with EMC requirements
TEPLA M – LA	Lead sheathed Armoured 3.6/6 through 18/30 kV power cables	For direct burial installation in direct and continuous contact with hydrocarbons, acids and bases
TEPLA M – SLA	Screened Lead sheathed Armoured 3.6/6 through 18/30 kV power cables	For direct burial installation in direct and continuous contact with hydrocarbons, acids and bases with EMC requirements

> TEPLA E – Earthing Cables

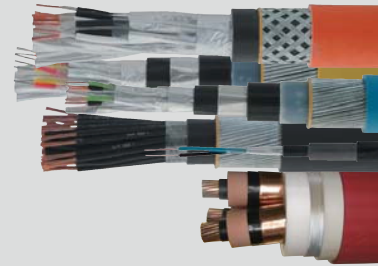
Product Family	General Description	Use & Installation
TEPLA E	0.6/1kV PVC/LSOH insulated green/yellow earthing cables	Control room interconnection and general indoor use

> TEPLA COM – Communication Cables
Communication cables for telecom and data transmission networks.

Product Family	General Description	Use & Installation
TEPLA COM – T	Copper twisted pairs armoured and unarmoured	Standard telecom application for voice and low bit rate transmission
TEPLA COM – D	Shielded and unshielded copper twisted pairs	High bit rate data transmission in typical structured cabling systems
TEPLA COM – FO	From 2 to 96 multimode and single mode optical fibre cables, armoured and unarmoured, loose and tight buffered	Very high bit rate and backbone data transmission in typical structured cabling systems
TEPLA COM – S	Pair, multipair, screened and coaxial cables	Serial connection, data-bus and local CATV networks
TEPLA COM/FR	Fire Resistant communication cables with all options indicated above	Fire hazard security circuits in general indoor use

Service

- > **Project consulting**
 - Specifying capabilities
 - Technical partnering with contractors and engineers for optimized cable choice, available on site and from Prysmian's technical help desk
 - Tailored solutions
 - Customer and end users support
- > **Easy to contact**
- > **Quick budgeting service to contractors during the tendering phase**
- > **Complete, exhaustive technical literature provided on paper or on line**
- > **Short lead times**
- > **Long term product availability**
- > **Reliable international distributors network**
- > **Qualified installation partnership focused on high tech network connections**
- > **Technical training available on request**



References

Process Plant and Infrastructure

Customer	Project	Country
Bechtel - Sinopec - Foster Wheeler	Shell Nanhai	China
Bechtel USA	IDKU LNG	Egypt
ENPPI	Egypt LNG	Egypt
Exxon Mobil	Chad Pipeline	Chad
Fluor Daniel	Sakhalin 1	Russia
Halliburton	Sha Deniz	Azerbaijan
KBR - BP	SHELL BRUNEI Project	Brunei
MW Kellogg	Bonny Island LNG	Nigeria
Parsons UK	SHELL Sakhalin II Project	Russia
Petrofac	Kashagan Early Programme	Kazakhstan
PFD	Tengiz	Kazakhstan
PoomLin	Sakhalin 1	Russia
Siemens PG	Shuwei at PP	Abu Dhabi
Siemens TS	Metro Kaoshiung	Taiwan
Snamprogetti	ADCO BUHASA	U.A.E.
Technip	BASF Chemicals - Caojing	China
Tecnimont	PP-HDPE Plock	Poland
TSKJ	Bonnie LNG train 5	Nigeria