

Since 1961

Electrical India

ISSN 0972-3277

India's oldest magazine on power and electrical products industry



ELECARAMA
we are all about electricity

18-22 January 2020
India Expo Mart, Greater Noida

**Hall 10,
B-13**

HOW TO ENHANCE TRANSFORMER EFFICIENCY

Electrical India Ranked Among
World's Top 100 Publications
in "The Future of Energy"

 **A Chary Publication®**



Scan the QR Code
to know more
about EI Website

Follow us on   

SUBSCRIBE/RENEW Online • Log on to www.electricalindia.in



Prysmian cable laying vessel

All cables are not the same!

Benoit Lecuyer, CEO, Prysmian India outlines some of the great innovations in the field of cables.

Jawaharlal Port; near Mumbai

Pushkar monitors the cables' system in real time. Port cranes' cables are exposed to harsh and heavy-duty conditions due to challenging environmental factors, and failures could lead to severe operation losses. Thanks to the Protolon IQ technology cables, the fibre optic embedded in the cables centre measures real time strain, excessive torsion, elongation on the cables, that require preventive maintenance

The Protolon iQ cables have a tension sensor (TESE), a special sensor fibre located in the centre of the cable that measures real-time strain along the entire cable length caused by stress. A torsion sensor (TOSE), an embedded RFID in the sheath of the

cable provides information about the twist of the cable compared to its initial position. The Prysmian technology identifies faults and provides immediate first-hand information about the cable's condition, as well as providing information as to when the cable needs to be changed, thus allowing action to be taken before there is a major breakdown, reducing costly machine downtime.

Delhi

Ramesh comes back home after a day at work. He parks his electric car in his garage, but, while his mind is still focused on the afternoon meeting, he forgets to insert the plug in the recharge station. Will he be late for his important client presentation tomorrow morning? Not to worry! Thanks to a Bluetooth

connection, the cable installed beneath the car automatically uncoils and joins the charging base thanks to a magnetic base. When Ramesh will start his car the next morning, the cable will automatically rewind back to its receptacle beneath the car base.

These are two examples of cable innovations that help assets protection, work optimisation, and daily life.

Cable systems provider for energy and telecom sectors Prysmian Group has developed an eco-friendly cable, manufactured using thermoplastic materials. Explaining the unique features of this innovative cable system, Benoit Lecuyer, CEO, Prysmian India, said, "P-Laser is an astute and eco-friendly insulated EHV cable, with a higher performance than



XLPE (cross linked polyethylene), using HPTE (high performance thermoplastic elastomer polypropylene based insulation). P-Laser insulated cables withstand increased operating temperatures by over 20 per cent, abiding to fluctuating demands in harsh environments. P-Laser cables production process utilises zero gas technology, reducing CO2 emissions by 1-tonne per km. Furthermore, degassing is no more required.”

He further informs, with a turnover of €11 billion and a workforce of over 30,000 people worldwide, Prysmian considers India as a core strategy of the group.

Looking closer, there are several great innovations in cables.

In the smart cities, an innovative idea consists of making use of the smart grids to allow bi-directional electric cars charging. In this situation, power can be shared between vehicles’

batteries. Electricity can also be drawn through the grids through photovoltaic solar panels. This is made possible thanks to dedicated cables.

Assets condition monitoring today is a paramount topic, as a loss of energy can generate large losses for the industries.

Prycam by Prysmian standalone or on cloud devices technology measures partial discharge on cables and accessories without service interruption. It eases the assets management, helps the prevention maintenance strategies, allows savings for the utilities. It reduces maintenance costs, and matches the smart cities requirements.

In the mining industry, safety is an essential factor. Here again innovative cables are proposed. Luminescent cables thanks to energy fed base, allow the workers to have luminous guidance in all conditions, and safeguard activities.

On fibre optics, innovation is a master key. The new Prysmian Flex ribbon offers lighter cables with a significant smaller diameter, ensuring kink resistance, and enabling use of smaller ducts. It features 200

and 250-micron fibre ribbons that still provide the advantages of mass fusion splicing. It is an ideal answer to the data centres and hardware infrastructures which need to evolve rapidly, addressing issues related to power efficiency, heat and cooling, and data transmission.

On the overhead cables, heat dissipation can be a challenge, new technology E3X, featuring a thin, durable coating applied to the surface of any overhead conductor gives substantial results.

On submarine interconnections, higher connections are a must, involving bigger conductors in greater water depth. Using aramidic armor give tremendous results in both these areas.

According to Benoit Lecuyer, “Partnership with great universities can instil new concepts or deepen new techniques. In this field, Prysmian studies nanotechnologies in power, control and instrumentation, mechanical resistance, low weight, chemical inertness, high degree of flexibility, electrical and heat conductivity. To facilitate innovation, several cable companies incepted it in their core program.”

Prysmian has initiated the “Corporate Hangar”, a fly-in zone for new ideas, where innovative projects can find a fertile ground to thrive.

Ideas are fuelled into the hangar from Prysmian Group employees, whose innovative ideas are developed into actual projects, and from the team of the Hangar who scouts for innovation outside the group’s perimeter, diving into the latest technology trends – such as Artificial Intelligence, machine learning, and looking for high-potential start-ups which can bring value to smart cable embedded activities. 



P-Laser insulated cables withstand increased operating temperatures by over 20 per cent, abiding to fluctuating demands in harsh environments.

Benoit Lecuyer,
CEO, PRYSMIAN INDIA