

INNOVATIVE AND DISRUPTIVE CABLE TECHNOLOGY FOR RAIL OPERATIONS



OLYMPUS™ CABLE – A BROADBAND CABLE TECHNOLOGY WITH AN INDIGENOUS DESIGN THAT WITHSTANDS EXTREMELY HARSH, HAZARDOUS ENVIRONMENTS AT 930° CELSIUS

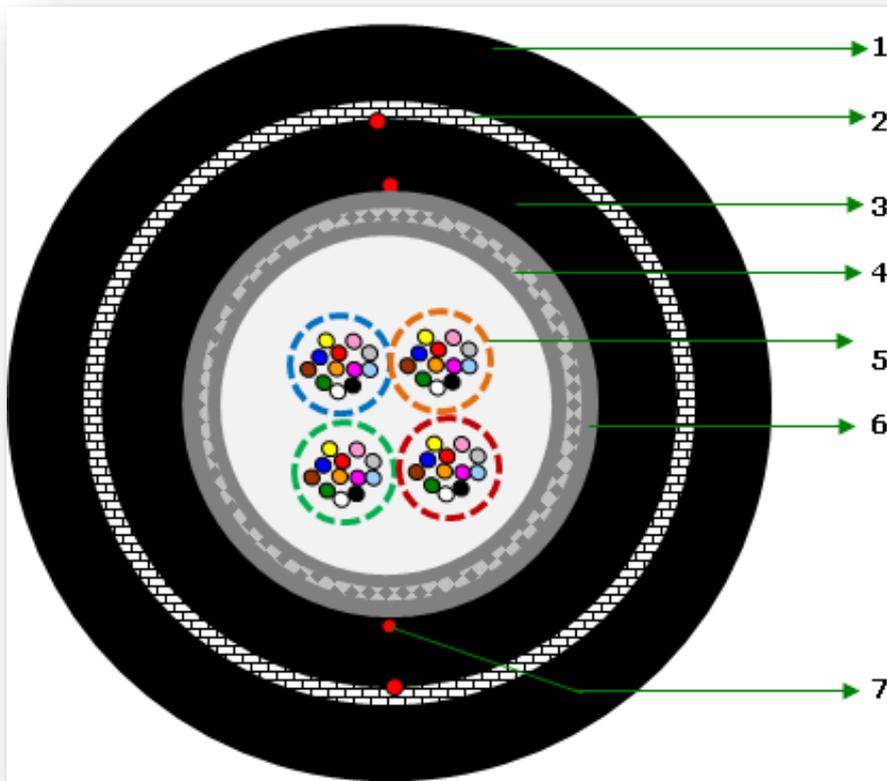
USP: The innovative OLYMPUS™ CABLE technology has demonstrated maximum circuit continuity for two hours under worst-case fire load of 930 degrees Celsius, along with water and shock.

APPLICATION: With the increasing use of Internet of Things applications, automation and integration of public and private rail, metro, freight services, the need for secure, mission-critical digital communication technologies has become all the more important to ensure efficient, uninterrupted, safe and secure rail operations that can support person-to-person, person-to-machine, and machine-to-machine information exchanges. Sterlite Tech's new cable technology suffices this demand for secure communications in extreme situations. This cable complies with major industry standards - BS EN 50200, BS 8434-2:2003, offering safety is at networks' core, meeting customers' specification of safe data transmission by providing circuit integrity, capability to withstand high temperatures and longevity in service, amid fire conditions. With proven performance, this cable can be used in a variety of harsh environments, including oil and gas fields, heavy traffic areas, wind farm developments, pipelines and heavy industrial sites.



TECHNOLOGY AT THE CORE OF MANUFACTURING

OLYMPUS™ CABLE



1. UV-proof black LSZH outer sheath
2. MICA tape + corrugated ECCS tape
3. UV-proof black LSZH inner sheath
4. MICA tape + water swellable yarns
5. Steel tube with fibres, bundle binders and jelly
6. Glass yarns layer over MICA tape
7. Ripcord(s)

PROJECT BACKGROUND

A Metro project in the Middle East that consists of a 6-line metro system running for 172 km, connecting 85 stations, required high-speed broadband infrastructure to provide signalling and radio communications. The project was awarded to Sterlite Tech as an approved global partner by a leading network deployment leader in Railways broadband technology. This customer provides reliable network solutions that play a critical role in helping Railway operators and public transport authorities ensure safe, on-time, and connected journeys.

PROJECT REQUIREMENT

The project required the cable to be deployed inside the tunnels for radio and signalling applications. The cable had to be compliant to IEC 60331-2, BS EN 50200 2015 & BS 8434-2 2003 +A2 2009. This means the cable technology had to pass a two-staged Fire Test:

- a) Burning for one hour at 930 degrees Celsius
- b) Water Sprinkle Test for one hour

This test ensures that in emergency situations the cable will perform and give the rescue team sufficient time for evacuation. Another critical requirement was longer cable lengths as the customer wanted to avoid splicing inside the tunnels. As Sterlite Tech was the only approved vendor for this project, the Company had to quickly develop an innovative solution to meet the deployment timeline.



TEAM @ STERLITE TECH

Rising to the challenge, Sterlite Tech's team of scientists consisting of Venkatesh Murthy (Head of Optical Fibre Cable Operations), Kishore Sahoo (Design and Development Manager), Dnyaneshwar Wagh (Deputy Manager, Design and Development) and Sravan Kumar (Deputy Manager, New Product Development) immediately got to work. Various designs available in the market at the time used Plastic Loose Tube Steel Tape armouring whereas, Sterlite Tech came up with an innovative design that used Steel Tube construction and Steel Tape armouring that made the cable robust and capable of withstanding extreme conditions.

ON ROAD TO DEVELOPMENT

To ensure the new cable design was ready for the application, the team developed the cable samples, only to realise that all the international labs, including the one in Italy, were occupied due to high demand and testing could not be completed in time for customer approval and largescale manufacturing.

To ensure the project timeline was kept to, Sterlite Tech took on the feat of setting up an in-house laboratory to complete the testing. As the cable performed exceptionally under test conditions, the Company offered the indigenously developed Unitube Steel Tube design which was accepted by the customer. Sterlite Tech thus completed 172 km delivery of this innovative cable in August 2017, within four months from the date of order.

FUTURE APPLICATIONS

With this development, Sterlite Tech owns the Trademark for the product and is awaiting grant of patent for the structure of OLYMPUS™ CABLE. As this cable can be used in a variety of extreme conditions, it has been made available for various sectors that includes metro-rail, fire-alarm systems, oil and gas, among other industrial applications.

About Sterlite Tech:

Sterlite Technologies Ltd [BSE: 532374, NSE: STRTECH], is a global technology leader that designs, builds and manages smarter digital networks. Sterlite Tech engages with customers in more than 100 countries, with a digital web-scale offering across products, services and software. The Company has global scale manufacturing facilities in India, Italy, China & Brazil and two Software Delivery Centres in India. Sterlite Tech is home to India's only Centre of Excellence for broadband research and Centre for Smarter Networks for next generation network applications. Projects undertaken by the company include intrusion-proof smarter data network for the Armed Forces, rural broadband for BharatNet, Smart Cities' development, and establishing high-speed Fibre-to-the-Home (FTTH) networks. For more details, visit www.sterlitetech.com and sumedha.mahorey@sterlite.com

