

Oil & Gas - SURF

## **Exploration & Production**

# **Power / Optical Umbilicals**

### **POWER / OPTICAL UMBILICALS**

Prysmian Subsea Umbilicals, Risers and Flowlines (SURF) is offering products for connecting subsea assets to a platform or floating production system at the surface. Prysmian Power / Optical Umbilicals are used for power feed, control, distribution, monitoring and two-way communication between production equipment.

#### **APPLICATION**

Prysmian Power / Optical Umbilicals are typically specified for power distribution and two-way communication between production units; subsea electrical submersible pumping systems; vertical annular separation and pumping systems (VASPS); subsea multiphase pumping system operational control and data transfer. Submarine Power/Optical Umbilicals are commonly used in the offshore industry in the following applications.

#### STANDARDS & APPROVALS

Reference Standard: ISO 13628-5 / API 17E. Designed and tested to withstand harsh environmental conditions in water depths as deep as 2,500 meters in both static and dynamic applications, power/optical umbilicals require a high level of structural resistance.

#### **QUALITY & TESTING**

Prysmian Group has one dedicated R&D Center for SURF Solutions based in Brazil, which is fully integrated with other 16 R&D centers spread worldwide, in order to benfit from Prysmian's high level of synergy and efficiency.

The R&D center for SURF in Brazil is structured to allow a full development of Umbilicals and Flexible Pipes. This center relies on dedicated facilities and qualified engineers and technicians whith a specific experience in SURF solutions.

Our laboratories offer a great variety of solutions for application development of polymeric materials and metals, failure analysis and plant support, mainly to provide the largest possible range of options.

All raw materials used in Prysmian SURF products are developed, tested and certified according to the most stringent Quality Standards.range of options.

#### **DESIGN & CONSTRUCTION**

Power / Optical umbilicals comprise the following functions:

- Low or medium voltage power cores;
- Optical core.











### Oil & Gas - SURF

## **Exploration & Production**

# **Power / Optical Umbilicals**

#### **PRODUCT RANGE**

Prysmian is able to provide a global solution for SURF products, for instance, from the cross-section definition and raw material selection up to the full qualified product and services during the product installation.

| PARAMETER  | VALUE  |
|--|--|
| Maximum Diameter   | Above 350 mm   |
| Strength Member  | Galvanized steel armour wire (Round or Flat), helically wound  |
| Manufacturing length limitations   | Qualified splicing processes are available.<br>Length limited by umbilical design, packing and installation method |
| Maximum allowable installation tension, breaking tension, and crush load | Designed to meet specific project's requirements   |
| Axial, bending, and torsional stiffness                                  | Based on specific design   |
| Design life  | 25 years, as standard<br>Longer design life can be provided  |
| Packing, transportation, and load out                                    | Based on customer's needs.<br>Options available include: reel, carousel, pallets, baskets                          |
| Installation methods   | Umbilicals designed to suit customer's installation method   |

This product information sheet is provided for reference only. For more details, please contact your Prysmian representative.

