Prysmian Downhole Technology (PDT)
Downhole Cables
Exploration & Production - Hybrid Cables



Hybrid Cables

Hybrid cables are combined electro/optical cables and are custom designs built to meet a customer's specific requirement. There are two main design methods:

1) Two separate TEC (electrical) and TEF (optical) tubes side by side in a flat pack,
2) A single tube containing a conductor twisted with a fiber in metal tube (FIMT). The drawing shown on this page is a single outer tube hybrid cable design.

Application

The primary application is well management.

A hybrid cable enables the combination of modern distributed fiber optic sensing well management technologies of DTS and DAS with traditional downhole electrical tools such as pressure sensors.

Standards & Approvals

Advanced Well Equipment Standard Group RP-3362 "AWES Recommended Practice for Qualification of Tubing Encased Fiber (TEF Cable Appendix A: TEC/TEF Cables"

Features

- Operating Temperature range -10°C to 150°C
- Multiple Fibers
- Range of Sizes
- Gel Filled Options
- Application Specific
- Extruded Filler
- Optional Bumper Bars
- Custom Line Marking
- Safety-Strip® Encapsulation

Design & Construction

Outer Tube Materials

- 316L Stainless Steel (UNS 31603)
- A825 Alloy (UNS N08825)

Outer Tube Sizes

- 1/4" to 3/8"

FIMT (Fiber In Metal Tube)

- Material: 316L Stainless Steel
- Size: 0.052" to 0.165"
- Fiber Quantity: Multiple
- Type: SMF and MMF
- Coatings: Temp Specific
- Gel: Temp Specific

Belt (Optional)

- PP / FEP / PFA

Encapsulation (Optional)

- PP (Polypropolene) / TPR (Santoprene) / PA (Nylon) / PVDF / ETFE (Tefzel) / ECTFE (Halar) / FEP / PFA / ECA 3000
- Round or Square profile

Flatpack Bumper Bars (Optional)

- 5/16" / 7/16" / 1/4" / 3/8" / Galvanized

Pressure Rating

- 1/4" up to 25Kpsi
- 3/8" up to 20Kpsi

For more information about Prysmian Downhole Technology products and services, please contact Walter Schomburg, Sales Manager, at walter.schomburg@prysmian.com

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