Prysmian Downhole Technology (PDT)
Downhole Cables
Exploration & Production - TEF (Fiber Optic Cables) High Temperature



TEF - High Temperature > 150° C

A typical TEF cable is a tube in tube design. The inner tube is a fiber in metal tube (FIMT). The FIMT can contain a range of fibers, both single mode (SMF) and multi mode (MMF). The fiber selection and appropriate filling gels can be customized to meet the customers specifications/ requirements. The FIMT can be centralized and supported within the outer tube by a layer of extruded material called “a belt.”

Application

TEF cable is a key enabler of modern well management technologies.

TEF cable is the sensor element for modern distributed fiber optic sensing technologies of DTS and DAS, which have become essential well management tools for monitoring important technologies such as SAGD and fracking.

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 ranges 150°C to 300°C
- Centralized FIMT
- 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

- 1/8" to 3/8"

FIMT (Fiber In Metal Tube)

- Material: 316L
- Size: 0.065" to 0.165"
- Fiber Quantity: Multiple
- Type: SMF and MMF
- Coatings: Temp Specific
- Gel: Temp Specific

Belt (Optional)

- FEP / PFA /ECA 3000

Encapsulation (Optional)

- 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

- 1/8" up to 25Kpsi
- 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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