

OIL & GAS – PDT – PRYSMIAN DOWNHOLE TECHNOLOGY

Exploration & Production

Downhole Cables

TEC (Instrumentation and Power Cables)

STANDARD TEC

TEC - Tubing Encased Cable (TEC) is designed and manufactured to withstand the varying harsh environments found associated with the oil and gas industry. The cable can be utilized for data transmission such as downhole gauge application through to larger cores where power is required or a combination of both.

APPLICATION

Tubing Encapsulated Cable (TEC), is typically used in oil, natural gas, and geothermal wells to provide power and communication to downhole gauges. TEC contains a core consisting of insulated electrical conductor(s). The tubing is generally deployed by strapping it to the outside of the production tubing or casing. However, it may also be free-hanging (self-supporting) inside the production casing. It may be encapsulated and can be included along with pressure tubing and mechanical components, such as bumpers, within a flatpack. The tubing is frequently supplied as 5,000 to 35,000 ft. coils on a wooden or steel reel, depending on the size.

STANDARDS & APPROVALS

Advanced Well Equipment Standard Group AWES Recommended Practice for Qualification of Tubing Encapsulated Conductor AWESTEC_01

QUALITY & TESTING

Manufactured in accordance with standard Inspection and Quality Plans Downhole cables are manufactured according to applicable ASTM standards for each specific material:
- Alloy 825: ASTM B704 and B751.
- Stainless Steel 316L: ASTM A450 and A632.

DESIGN & CONSTRUCTION

- Temperature ranges up to 150˚C
- Outer tube is tig welded and drawn through a die to final size
- Centralized Conductor
- Application Specific
- Double Extruded Filler
- Optional Bumper Bars
- Custom Line Marking
- Safety-Strip® Encapsulation
- Continuous length up to 100,000 ft.

Outer Tube Materials

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

Outer Tube Sizes

- 1/4" x 0.028" Wall Thickness
- 1/4" x 0.035 Wall Thickness
- 1/4" x 0.049 Wall Thickness

Double Extruded Centralized Core

- Size : 14 AWG - 18 AWG
- Type: Solid or Stranded Copper Conductor
- Plating (if required): Tin, Nickel, or Silver plating

Encapsulation (Optional)

- PP (Polypropylene) / TPR (Santoprene) / PA (Nylon) / PVDF / ETFE (Tefzel) / ECTFE (Halar)
- Round or Square profile

Pressure Rating

- 1/4" up to 25Kpsi



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