

SureSight DTS

Durable Downhole DTS Cable

TAQA's Distributed Sensing System (DTS) comprises of downhole and surface fiber optic equipment to provide high resolution, permanent monitoring of well temperature.

TAQA's DTS System uses a combination of variations in back-scattered light intensity and time reflectometry to create temperature against distance profiles. The fiber acts as both a sensing element and transmission medium.

SureSight DTS Cable

The SureSight range of DTS cables provide maximum protection to the sensing fiber, providing the operator with more visibility as to what is happening in the reservoir.

The construction of the SureSight cable consists of a dual-barrier design with two metal tubes providing mechanical protection and a barrier against chemical and gas ingress. Coatings on the fiber can be used to prevent damage caused by hydrogen. 11mm x 11mm encapsulation can be used to add an extra layer of protection to the cable.

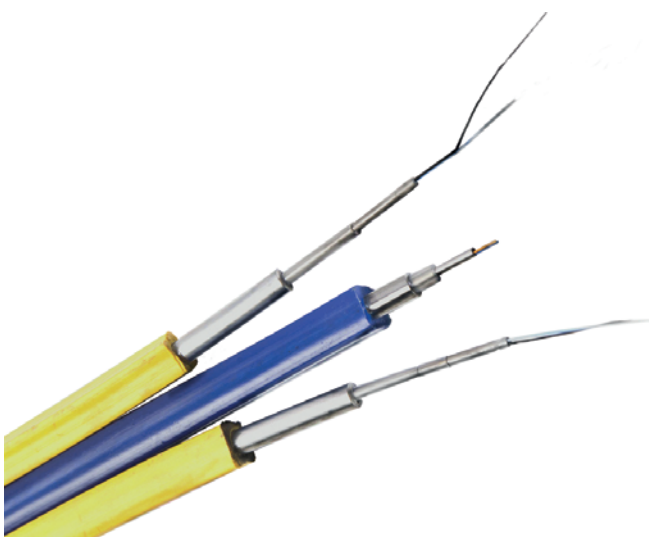
The SureSight DTS Cable is available in a range of sizes and structures which vary depending on the application and downhole conditions.

Features

- Wide range of encapsulations, metallurgy and wall thickness available
- Splice free lengths >30,000ft (>9144m)
- Tubing material: SS316L and Incoloy® 825
- Suitable for permanent and temporary deployment
- Life of well reliability

Benefits

- Ability to measure temperature along the entire tube
- Suitable for a wide range of downhole conditions
- Multiple fibers can be included inside the cable



Selection Criteria

OD	Wall Thickness	Working Pressure Rating	Tensile Strength	
			316L	A825
1/8"	0.022"	0 - 25,000psi	-	120,000psi
1/4"	0.028"	0 - 10,000psi	105,000psi	120,000psi
1/4"	0.036"	0 - 15,000psi	105,000psi	120,000psi
1/4"	0.049"	0 - 20,000psi	105,000psi	120,000psi

Tubing material recommended for use in oil or gas base annular fluids (no water)

Use 316L stainless steel when H₂S is not present

Use A825 when H₂S is present in any amount

Tubing material recommended for use in water base annular fluids

Use 316L stainless steel if CO₂ is present in concentrations <1% chlorides are present in any concentration, and BHT >110°C

Use 316L stainless steel if CO₂ is present in concentrations <1% and no chlorides present

Use A825 when H₂S is present in any amount

Use A825 if CO₂ is present in concentrations >1%

Use A825 if CO₂ is present in concentrations <1% chlorides are present in any concentration and BHT >110°C

Tubing encapsulation recommended for use in oil or gas base annular fluids (no water)

Use Polyamide when BHT <150°C and no water is present

Use FEP when BHT > 150°C and no water is present

Tubing encapsulation recommended for use in water based annular fluids

Use Polyolefin when BHT <125°C and gas with CO₂ is present

Use ECTFE when BHT is >125°C <150°C and gas with CO₂ is present

Use Polyolefin when BHT <150°C and gas without CO₂ is present

Use ECTFE when BHT is <150°C and petroleum is present

Use FEP when BHT >150°C

Fiber recommendation when no hydrocarbon is present

Use VHM2000 Std. Acrylate when BHT <85°C and MM is required

Use VHS 100 Std. Acrylate when BHT <85°C and SM is required

Use VHM2000 MTDA when BHT >85°C <150°C and MM is required

Use VHS100 MTDA when BHT >85°C <150°C and SM is required

Fiber recommendation when hydrocarbon is present

Use VHM2000 C/A when BHT <85°C and MM is required

Use VHS100 C/A when BHT <85°C and SM is required

Use VHM2000 C/MTDA when BHT >85°C <150°C and MM is required

Use VHS100 C/MTDA when BHT >85°C <150°C and SM is required

Fiber recommendation when BHT is above 150°C

Use VHM2000 C/P when BHT <200°C and MM is required

Use VHS300 C/P when BHT <200°C and SM is required

Use VHM3000 C/P when BHT > 200°C <300°C and MM is required

Use VHS300 C/P when BHT >200°C <300°C and SM is required