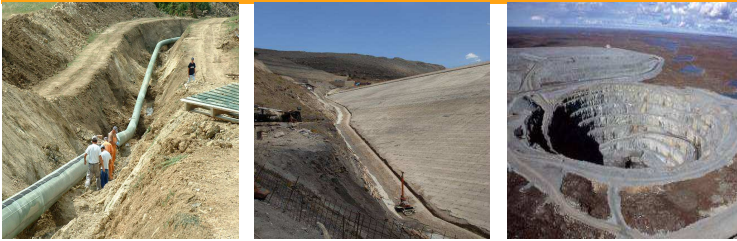


14.1415 DITEMP SMARGeoTex FABRIC

Fiber optic combined temperature sensing cable and geotextile



GENERAL DESCRIPTION

Geo-textile structures, beside reinforcing capability in the field of geotechnical engineering, can be also equipped with FO sensors for monitoring purposes. Thus DiTemp SMARTGeoTex Fabric becomes an innovative solution that combines the benefits of using geosynthetic materials with the sensing capabilities of FO for geotechnical applications and structural health monitoring.

The DiTemp SMARTGeoTex Fabric, based on the Raman scattering technology, combines temperature sensors with geosynthetic material and are designed for distributed temperature monitoring over long distances.

The geosynthetic provides filtering capability in order to prevent scouring phenomena around the sensor and increase the drainage of water towards the sensors.

The DiTemp SMARTGeoTex Fabric sensor is especially suitable for leakage detection in geotechnical structures such as dams, dikes and levees.

The DiTemp SMARTGeoTex Fabric integrates SMARTEC Temperature Distributed Sensor; the Temperature Distributed Sensor can be integrated with optional self-heating capability, to be used for active leakage detection.

The DiTemp SMARTGeoTex Fabric sensor is fully compatible with DiTemp® system. It is delivered on customized spools and with all the necessary accessories.



FEATURES

- Distributed temperature sensing
- Sensor integration in geo-textiles for in-field geotechnical application
- Good mechanical coupling with the surrounding soil thanks to filtering capabilities of the geo-textile
- DiTemp® compatible
- Mechanically reinforced
- Chemically resistant
- Easy and rapid installation
- Light weight and small dimensions

PERFORMANCES

DiTemp SMARGeoTex Fabric	Test Method	Units	Typical	Values
Tensile strength	ASTM D 4595	kN/m	MD/CD	37 /12
Elongation at maximum strength	ASTM D 4595	%	MD/CD	11.5 / 85
Tensile strength at 2% strain	ASTM D 4595	kN/m	MD	7.5
Tensile strength at 5% strain	ASTM D 4595	kN/m	MD	14
Friction properties in contact with sand (40°)	ASTM D5321	degrees		30°
Puncture resistance (CBR)	ASTM D 6241	kN		2.4
In-the plane water flow capacity @ 20 KPa	ASTM D 4716	³ /s/m		20 10 ⁻⁷
Weight per unit area (without FO sensors)	ASTM D 5261	g/m ²		290
Standard width (other on demand) ²		m		1
Standard length (other on demand) ²		m		100-600

MD: Machine direction, also direction of the FO sensors

CD: Cross direction

¹ Higher strength on demand

² Custom roll sizes available



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