



STFOC for Sensing

Application

- Down-Hole
- Distributed Temperature Sensing
- Dynamic and Static Strain Sensing

Features

- Patented Liquid Crystal Polymer (LCP) jacketing (US Patent No. 7,570,853)
- 100% thermoplastic jacket eliminates need for metal & Kevlar
- Non-corrosive
- Lightweight – LCP density:1.4g/cm³ compared to inconel 625:8.4g/cm³
- Hermetic coating protects fiber from moisture/hydrogen/helium
- Withstands high pressure
- No hydrogen outgassing
- Better moisture protection than carbon

Table 1. Cable Properties STFOC vs. Fiber in a Metal Tube (FIMT)

	Linden STFOC	FIMT*
Max Yield Strain	4%	0.5%
Hermeticity	LCP Jacket	Expensive Carbon layer
Max Operating Temperature	170°C	150°C
Typical min Diameter	0.760mm	1mm
Min Bend Radius	0.38"	0.75"
Corrosion Resistance	Non-Corrosive	Corrosive
EMI Transmission	Non-Conductive	Conductive

*Typical Properties

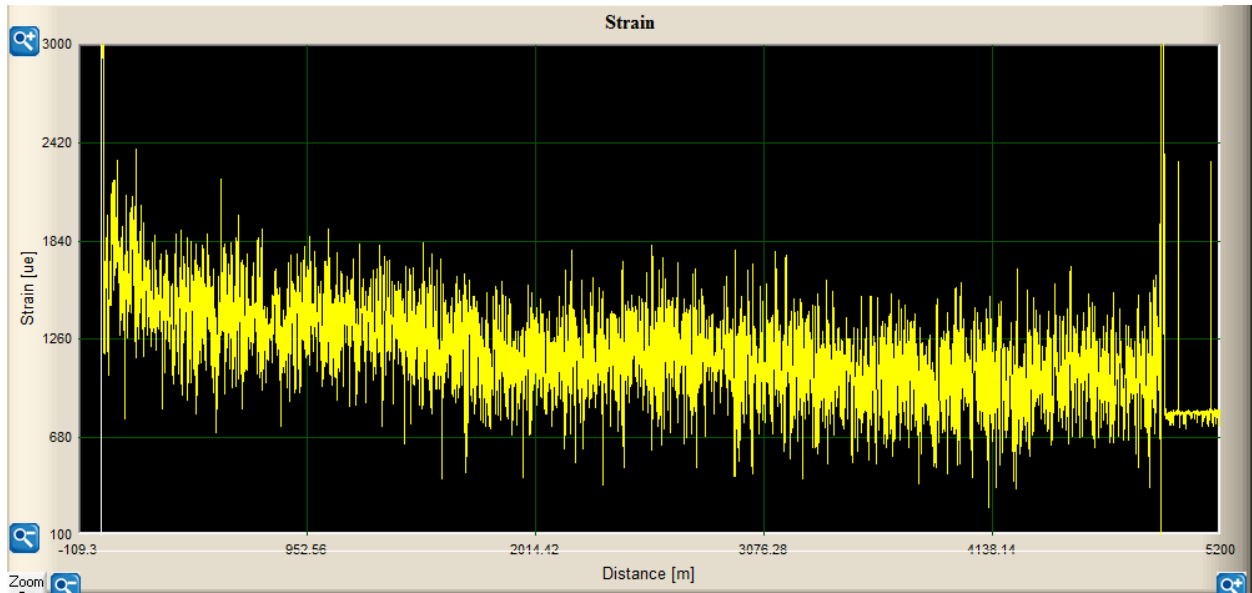


Figure 1. Microstrain vs. Distance for 5km length of Linden STFOC (Cable ID 1303004A)

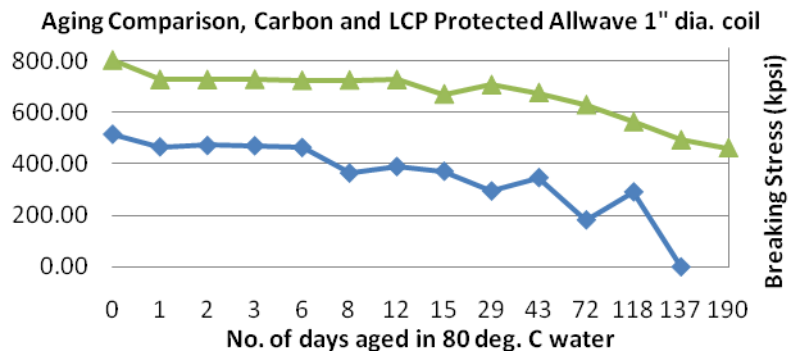


Figure 2. Strength of Carbon Coated Fiber vs. LCP Protected Fiber. 1" Mandrel.