



101 series

FIBER OPTICS IN THE OIL & GAS INDUSTRY IN ASSOCIATION WITH

INTRODUCTION

A new series of training courses- the 101 series – has been developed by OTM to highlight the transfer and development of innovative technology into the oil and gas industry.

WHO SHOULD ATTEND

- Newcomers to the oil and gas industry
- Engineers, technical, sales and administrative staff
- Anyone interested in gaining an understanding of fiber optic technology and its applications

Attendees do not require any previous experience or knowledge of fiber optics

COURSE DATES AND COST

- Discounts are available for SEAFOM members and group bookings. Please contact OTM for further details
- Latest course dates and costs are available at www.otmnet.com
- Each course will be limited up to 30 delegates in size

ON COMPLETION

The course will leave delegates with:

- A good understanding of the basic principles of fiber optics
- An introduction to applications within the subsea environment
- An appreciation of the challenges and obstacles that fiber optics faces in the future

COURSE CONTENT

INTRODUCTION TO FIBER OPTICS

How do fiber optics work?

- History
- Fiber Optic Theory – Electromagnetic Spectrum/Optical Window
- Light Transmission in Fiber – Bandwidth / Dispersion / Fiber Parameters / Graded Index / Single mode and multi mode

CHARACTERISTICS OF THE FIBER

How are fiber optics made and how does this affect how they are used

- Fiber Types and Optical Design – Fiber Manufacture/Primary coated Fibers / Multi core Fibers / External Fibers
- Techniques and Effects: Raman effect / Bragg grating / polarisation / Stokes
- Fiber Optic Sensors: Intensity based sensors / phase based sensors / wavelength based sensors / polarisation sensors/distributed sensing

FIBER OPTICS IN OIL AND GAS INDUSTRY

This section will focus on applications across the oil and gas industry and historically plot its implementation:

- Telecommunication
- Subsea
- Pipeline integrity

SUBSEA APPLICATION

This section will focus on the current R&D as well as the status of implementation. It will also examine the potential application in the subsea environment

- Downhole Sensors
- Umbilicals
- Connectors
- Installation issues
- Distributed pressure
- Frontier operations

CONTACT

If you are interested in attending the course further details can be found at www.seafom.com or www.otmnet.com or contact Sally Marriage at OTM Consulting Ltd,

Tel: **+44 (0) 1483 598000** Email: sally.marriage@otmnet.com