

OP-456-61 Splicing, Testing & Termination Masterclass

(1) OPTICAL FIBRES AND OPTICAL COMMUNICATIONS

Benefits of fibre
Wavelength & Infra-Red Communications
Fibre Construction & Total Internal Reflection
Primary & Secondary Coated Fibre
Fibre Profiles – Singlemode & Multimode
WDM, CWDM, DWDM
Understanding Units – nanometres, dBm, dB
System budget calculations
Fibre Loss Mechanisms
Rayleigh Scattering
Absorption
Bending Losses: Macrobending & Microbending
Dispersion Mechanisms
ITU G.65x series fibre specifications
OM1, OM2, OM3, OM4, OM5, OS1, OS2 fibre
10 GbE systems

(2) HEALTH & SAFETY

Safety risks
Fibre hazard
Accessory hazards
Power hazards
Laser Classifications

(3) CABLES & CONNECTORS

Cable design
Cable types and developments
Connector basics
Construction
Connector Cleaning
Reflections
Polish Styles
Connector Performance
Connector types

(4) TESTING

Insertion loss measurements
Bare fibre cut back tests
Return loss and reflections
Continuity checking - visible lasers
Live fibre identifying
Source Issues
Meter Issues
Calibration issues

(5) OTDR INTRODUCTION

OTDR features
OTDR theory of operation
OTDR key parameters
Index of Refraction - IOR
Fibre Overfill
Launch conditions
Bare fibre testing
Mismatches
Saturation & Linearity
Ghosts.

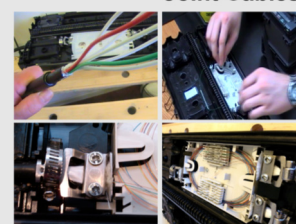
(6) OTDR SPECIFICATIONS AND CAPABILITIES

Dynamic range
Dead zone
Pulse width & Resolution
Distance Accuracy
Backscatter Coefficient
Distance measurements
Fibre loss measurements
Launch Cables
2 point & 5 point splice loss
Reflection Measurements

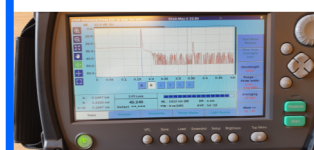
(7) USING THE OTDR

OTDR menus
Customising
Trace & Event table
Other features
Setup
Setting Preferences
Setting Thresholds
Fault Locate
Store & Recall Traces
Auto testing
Comparing Traces
Making a measurement
Manually locating the fibre end
Measuring the total link loss
Measuring Reflectance
Measuring Fibre Attenuation
Testing for bends

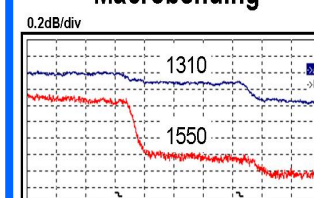
Joint Cables



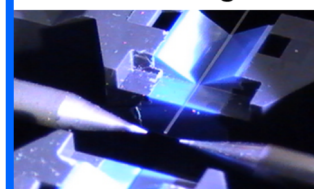
Test with an OTDR



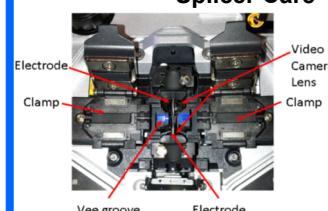
Macrobending



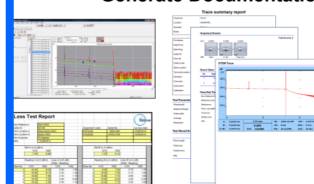
Place fibre in v-groove



Splicer Care



Generate Documentation



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(8) SPLICING BASICS

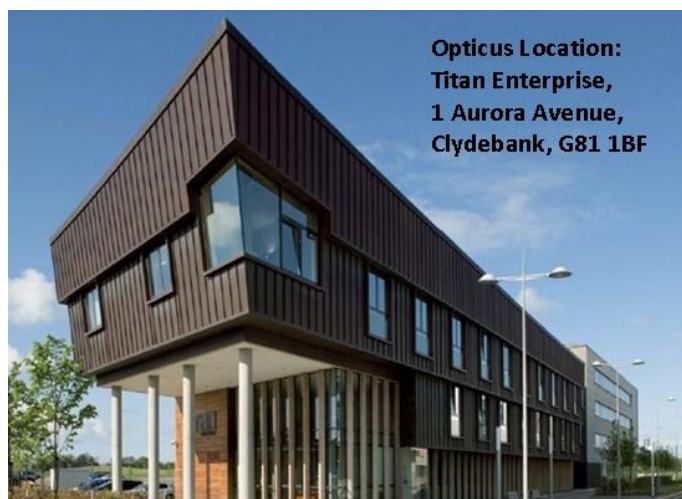
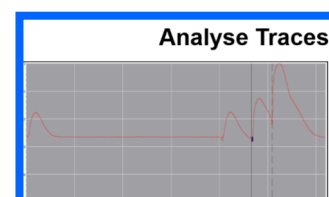
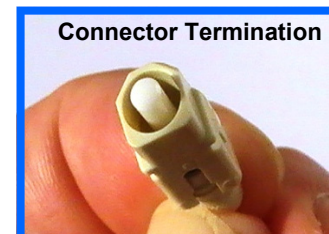
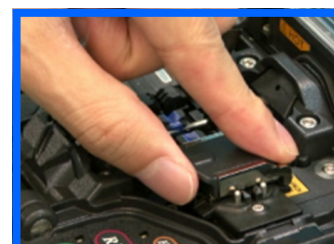
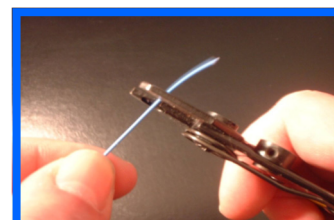
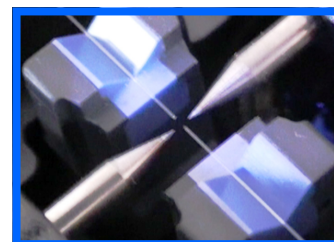
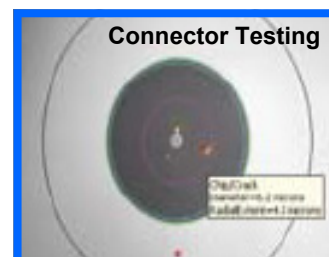
- Splicer features
- Types of splicer
- Splicer theory of operation
- Splice loss measurement
- Good and bad splices
- Parameter set up
- Fibre Stripping Methods
- Cleaving
- Fibre positioning and clamping
- Splicing the fibre
- Splice Protection
- Mechanical alternatives

(9) FIBRE MANAGEMENT & JOINTING

- Fibre Cable Joints & Fibre Management principles
- Cable & Joint Preparation
- Sheath Stripping
- Fibre Cleaning
- Fibre routing into splice tray
- Splicing and Splice Protection
- Completing the fibre Joint.
- Optical Distribution Frames

(10) TERMINATING CONNECTORS

- Connectors
- Connector polish styles
- Connector Types
- Connector parts
- Field termination tools
- Fibre Stripping & Preparation
- Connector preparation
- Assembling the connector
- Curing
- Scribing
- Polishing
- Inspection
- Importance of Clean Connectors
- Cleaning Methods
- Mechanical Splicing
- Testing Connectors



OP-456-61 Duration : 3 Days

Course can be tailored to suit specific requirements – please contact us on +44 (0) 1419517822 to discuss your needs.

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