DIAMOND the fiber meeting

Introduction in fibre optics, for harnessing systems in Airbus Aircrafts.

(Use of the – FO Repair set ABS 1632-003, Diamond P/N 1047320)

1 Day: Theoretical Bases

- Optical Fundamentals
- Fundamentals of the optical fibre, description of fibre types
- Production process of the optical fibre
- Structure of fibre optic cables
- Fibre optic interconnection systems; splices, connectors,
- Optical parameters of an interconnection: Insertion Loss, Return Loss
 - But joint connectors
 - Expanded beam connectors
- Transmission systems; single and bidirectional systems
- Precautions for safe cabling with optical fibre
- Maintenance of fibre optic interconnections:
 - Inspection
 - Cleaning
- Maintenance of fibre optic interconnections.
 - Inspection
 - Cleaning
- Measurement tools for fibre optic assemblies, components and harnesses:
 - Source Optical Power Meter technique
 - Optical Time Domain Reflectometry.
- Troubleshooting and repair using the Repair Set und Kit ABS 1632-003 (Diamond P/N 1046361, resp. P/N 1047320)



2, 3, 4 Day: **Practise**

- Search of faults in fibre optic harnessing
- Maintenance and cleaning of fibre optic interconnections
- Measurement and characterisation of fibre optic assemblies and components, mainly connectors
- Fault location and troubleshooting in fibre Optic harnesses with OTDR technique
- Harnessing repair using Repair Set ABS 1632-003 (Diamond P/N 1046361, resp. P/N 1047320):
- Handling of an optical fibre, resp. Fibre cable
 - Cable stripping
 - Preparation of the strain members
 - Stripping of a fibre





- Repair of an optical fibre
 - Stripping and repair using repair set
 - Measuring of the repaired optical line using Light Source and Power Meter
- Repair of a fibre cable:
 - Cable, resp. fibre preparation
 Stripping and repair using Repair set
 - Measuring of the repaired optical line with OTDR technique, resp. Light source and Power Meter,
- Repair under difficult conditions:
 - The process is done in an uncomfortable position, which requires the working bench; eventually in a dark area, where the head lamp is necessary
 - Cable, resp. fibre preparation
 - Stripping and repair using repair set
 - Measuring (quality control) of the repaired optical line

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