

DigiTRONf



Site Received Test Manual
SRT005 - Rev02

DigiTRONf - Optical Flying Leads, Jumpers and Harness
Assemblies

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1 INTRODUCTION

This document defines the procedure and equipment required to carry out the Site Received Test on Optical Flying Leads, Jumpers and Harness Assemblies.

This document must be read in conjunction with the Installation, Operation and Maintenance document IOM-008, which contains all specifications, product use instructions and product safety information.

This can be found on Siemens Energy Subsea website <https://www.siemens-energy.com/> / search Subsea

2 PURPOSE

The purpose of this document is to ensure that the Site Received Test is performed where specified, on all AquaTRON oil-filled optical jumpers and optical harness assemblies. IL and RL tests will be performed along with a visual inspection for any damage pre- and post-test.

3 ASSOCIATED DOCUMENTS

IOM-009	Installation and Operation Manual for DigiTRONf Connectors
IOM-008	Installation and Operation Manual for DigiTRONf flying leads

4 ABBREVIATIONS

AFT	Advanced Fibre Termination Unit
dB	Decibel
FAT	Final Acceptance Test
IL	Insertion Loss
IOM	Installation, Operations and Maintenance Manual
nm	Nanometre
OFL	Optical Flying Lead
OTDR	Optical Time-Domain Reflectometer
RL	Return Loss
SQEP	Suitably Qualified and Experienced Persons
SRT	Site Received Test

5 PRODUCT TYPE

OFL
AFT Harness
Multi Leg Harness

6 CUSTOMER COMMENTS / FEEDBACK

For additional information or questions regards the products visit the Siemens Energy website www.siemens-energy.com /search Subsea or contact the following.

Department	E-mail address
Product Safety Officer	subsea.connectors.productsafety.gb@siemens-energy.com
Technical Support	connectortechsupport.gb@siemens-energy.com
Service (Site Team)	susultlcmsupport.gb@siemens-energy.com
Sales	connectorsales.gb@siemens-energy.com

Any information, records, or Health and Safety feedback that needs to be detailed can be recorded in section 14 of this document and sent to the relevant email address.

7 HEALTH AND SAFETY

Note:

Before any work begins, documents IOM-008 and IOM-009 must be referred to for safety information relating to the product and use of.

- Only suitably qualified and experienced persons (SQEP) are permitted to perform tasks without supervision, if in doubt ask.
- Manual Handling, Lifting and Carrying are known to be the largest contributors to occupational ill-health. Ensure that mechanical handling aids are used whenever possible to avoid manual handling. Handling/lifting guidelines must be followed, e.g. adopt correct postures, consider team lifting, employ safe lifting technique, etc.
- Good Housekeeping avoids Slips Trips and Falls, keep your area clean and tidy.
- It is the operator's responsibility to comply with all local health and safety legislation.
- Glass fibres embedded in skin or eye, or inhaled, potentially entering blood stream can cause serious medical conditions. Operator must therefore be trained in the handling of optical fibre. When cleaving, all sharps must be disposed of into a sharps bin immediately after breaking off the fibre end. Do not leave any fibre sharps on benches or on the cleaver. Where possible, work on a black surface to enable sharps to be more easily seen. Do not attempt to vacuum up the sharps. Take extreme care when handling stripped (i.e. bare) fibre and do not touch the cut ends of any fibre, stripped or not. Wash hands before eating or smoking. Wear safety glasses when cleaving. Fit the rubber bung in the sharps bin when not in use.
- Light from OTDR can damage eyesight. Only trained operatives shall use this equipment. Class 1 is considered "eye-safe" however direct long term eye exposure should be avoided. Do not stare into beam (Note: laser light emitted from the optical test equipment is invisible) and do not visually inspect ferrule end faces unless sure that they are not connected to the test equipment.

8 RESPONSIBILITIES

It is the operators' responsibility to comply with this instruction and to ensure all test equipment is within calibration and report any problems to the Quality Control Inspector. The operator shall also be responsible for completing the Test Results Sheets.

Care must be taken during handling, any damage to the connectors can result in schedule delays.

9 MANUAL HANDLING, UNPACKING, STORAGE

- Details on each of these sections, is explained in the IOM-108/IOM-009 manual.

10 VISUAL INSPECTION AND CHECKS

- Upon receipt of each connector please handle in accordance with procedures detailed in IOM-008/IOM-009 .
- This document contains a signature section to be completed by the user.

Note:

Visual inspection for damage to be completed by trained technician

10.1 Inspection Parameters

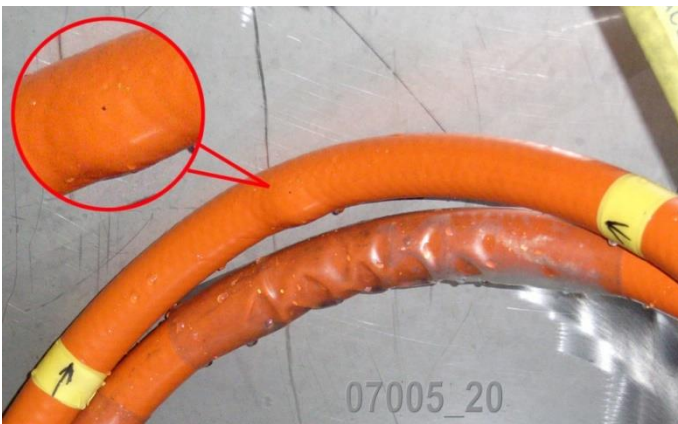
VISUAL INSPECTION CHECK LIST		
	Pass	Fail
Check OFL / Jumper / harness and connectors are correct part ordered. If connector is wrong part please stop test and inform technical dept		
Place Check OFL / Jumper / harness and connectors on a clean surface and check entire length for any visual damage or leaks. Some example images can be found below		
Ensure hose is straight and check length against GA drawing		
Check fibre tails are undamaged along length (If applicable)		
Remove protective caps from connectors and check contact face/seal is free of debris or damage and is seated properly.		
Inspect connector body for any impact damage, scratches		
Re-install protective caps		
Check tagging and etching is to project requirements		
Repackage and store in accordance with IOM-008 manual		
Name:	Signature:	



Example images: To help identify hose damage, debris, defects and fading.

Check Hose surface for damage such as cuts, rips, tears, leaks and deformity.

(Picture shows cut in hose)



Check hose for discolouration and surface deformity.

Faded hoses can be acceptable so long as they are in good condition with no leaks or cracks.

(Picture shows deformity)

Hose / Cable minimum bend radius must NOT be less than stated, this could result in damage to the Hose / Cable

Minimum Bend Radius

Aquatron 50 Hose.....125 mm

Note:

Any failure to this criterion must be recorded on the feedback sheet at the back of this document and sent to Siemens Energy.

Photos must be taken as evidence to help rectify any non-conformance

11 OPTICAL TEST

IL and RL test to be performed
 1625nm wavelength is suggested (others are acceptable)
 Test is only required in one direction (i.e. from one end only)
 All 12 fibre optic lines shall be tested.

11.1 Optical equipment

OTDR (Hi-Resolution OTDR is recommended to see all optical events, Low-Resolution is acceptable)

A test plug (PN:GB9:10070008-00) or test receptacle (PN: GB9:10070009-00)
 Connector Mating Tool (PN: S1U10509147)

Equipment Calibration Details		
Equipment Used	Equipment ID	Calibration Date

Optical Test Parameters				
Acceptance criteria for IL and RL			Pass	Fail
IL ≤ 0.5dB, 75% ≤ 0.4dB				
RL ≥ 45dB, 75% ≥ 55dB				
Line No	IL	RL		
Line 1				
Line 2				
Line 3				
Line 4				
Line 5				
Line 6				
Line 7				
Line 8				
Line 9				
Line 10				
Line 11				
Line 12				
Name: _____			Signature: _____	

12 FAULT INVESTIGATION

Note:
Only complete if a fault is present

Connector Fails Test		
	Pass	Fail
Check all connections are fully connected		
Remove all connections and inspect all contacts for damage or debris		
While disconnected check all equipment is working and set up correctly		
Re-connect all equipment and repeat tests		
Name: _____ Signature: _____		

Note:
If there is still a failure, please stop test and contact Siemens Energy, using Feedback Form at the end of this document


13 FINAL INSPECTION

Connector Fails Test		
	Pass	Fail
Check connector and verify no damage or leaking has occurred		
Ensure protective caps are fitted		
Check to ensure that tags are fitted in accordance with the relevant drawing or tag schedule		
Ensure loose items (if any) are attached with connector		
Name: _____ Signature: _____		

FINAL CHECK:
Make sure this document has been fully completed and all results/information recorded in the correct section.

14 CUSTOMER COMMENTS / FEEDBACK

Please complete the Sign Off section at the bottom of form to confirm each page of this document has been read and complied with in full.

Originator Name and Initials (BLOCK CAPITALS)		Date
<input checked="" type="checkbox"/> Contact Details		 Contact Details
Project Reference	Customer	Region
Product Type	Part Number (P/N)	Serial Number (S/N)
<p>Please enter details below e.g. comments; complaints; evidence of good practice; incident reports; observations and recommendations, including any associated with health, safety or the environment, etc., also include any names/contact details</p>		

Sign Off Section

Name (BLOCK CAPITALS)	Signature	Date

Please e-mail completed form to the relevant Siemens-Energy contact in section 6 of this document.

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For more information, please visit our website:

www.siemens-energy.com/subsea

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