


OP-SL-QMS-8.3.5.: Elemente de iesire ale proiectarii Format: ST-SLT-R&D-002	QUALITY CONTROL PLAN-EXAMPLE		
	Cable type:	Optical Cable Type	
PCC no.....	Technical specification :	TDS.....	OPTICAL FIBER
	Customer:	Name of customer	

Customer:	Name of customer
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Product Description:	Optical Cable Type
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Specifications / Standards:	IEC 60793	
	IEC 60794	
	TDS.....	
	Prysmian CA:	CA-no.....
	MC-01 Prysmian Quality Manual	
SPI/CS/90101/7		

Edition	Revision	Date	Major Change
1	0	01.07.2022	First issue

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Distribution List

QC Department	The original signed
Design Department	Electronic Copy
FO Production Department	Electronic Copy


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Materials

Nr.	MATERIALS	INTERNAL CONTROL
1	Optical fiber: SM LOH MagniLigt 35_35	· Reception note · Declaration of Conformity · Quality Certificat · Documented suppliers
2	Ink: UV Cabellite	
3	Buffer tube materials: Ultradur B6550 Octabin	
4	Jely: Unigel 400N	
5	GRP : 2.40mm	
6	Twine: FL-P1500LS/BIND	
7	Tapes: Tapes: PET ID76MM, GFS1120	
8	Yarns: Aramid D2200 si W/B Type 1052, 1610 dtex	
9	Sheath Materials: Granules HDPE outer jacket	
10		
11		
12		
13		
14		
15		
16		
17		

Stages of Production

Nr.	INTERNAL PROCESS	PROCEDURE CODE
1	Processes for Customer Relationship	PO-COM-7.2
2	R&D	PO-R&D-7.3 DFO-MLT
3	Verification of Purchased Product	PO-LOG & QC-7.4.3
4	Optical Fiber Coloring	IO-PTF-001 DP- COL- TDS..... no. of fibres
5	Buffering Loose Tube	IO-PTF-002 DP- BUF- TDS..... no. of fibres
6	Interim Testing	TI- TDS..... no. of fibres
7	Filler Extrusion	IO-PTF-002 DP- FIL- TDS..... no. of fibres
8	SZ Stranding	IO-PTF-003 DP- ISZ- TDS..... no. of fibres
9	Sheath Extrusion	IO-PTF-005 DP- TUB- TDS..... no. of fibres
10	Final Test Routine Controls	Proceduri interne PCC no.....
11	Type Tests	Proceduri interne SPI/CS/90101/7
12	Documents and Records Control	PO-AQ-4.2.3 / 4.2.4
13		
Legend: DFO = OF Design DP = Process Data COL = Fiber Coloring BUF = Buffering TIN = Interim Testing ISZ = SZ Stranding FIL = Filler Extrusion MAN= Sheath extrusion PO= Operational Procedures		

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1. Processes for Customer Relationship


Nr.	Type	Characteristic	Frecvency	Acceptance	References	Instrument	Control Authority	Recording
1.1	Input	Contract Analysis	100%	Analysis of the control requirements in accordance with the documentation from customer and Prysmian	PO-COM-7.2 TDS..... Order		Commercial Director	Customer orders folder
1.2	Output	Internal Communication	100%	Documents distribution to departments	PO-AQ-5.5.3 TDS.....		Commercial Dir. Design Director	Customer orders folder

2. R&D

Nr.	Type	Characteristic	Frecvency	Acceptance	References	Instrument	Control Authority	Recording
2.1	Input	Document analysis and design cables	100%	Design of optical cables in accordance with customer requirements	PO-COM-7.2; PO-R&D-7.3; DFO-MLT TDS.....		Design	CA TDT offer
2.2	Output	Internal Communication	100%	Documents distribution to departments	PO-AQ-5.5.3 CA-no.....		QA Representative Design Dir.	E-mail SAP

3. Verification of Purchased Product


Nr.	Type	Characteristic	Frecvency	Acceptance	References	Instrument	Control Authority	Recording
3.1	Input	Input Document Analysis	According to internal procedures	According with technical and quality documents	PO-LOG & QC-7.4.3 RMS XXXXXX	Visual check	QC Department	NIR Input documents (sign., check)
3.2	Output	Verification of Purchased Product	According to internal procedures	According with technical documents	PO-LOG & QC-7.4.3 RMS XXXXXX & PT XXXXXX	Laboratory devices	QC Department	Reports Recordings

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4. Optical Fiber Coloring

Nr.	Type	Characteristic	Frecvency	Acceptance	References	Instrument	Control Authority	Recording
4.1	Input	Natural fibres reception	100% coils from FOS	FOS labels + QC Stamp Launching Documents	FOS labels, PS 7.5.3 FL- COL- TDS..... no. of fibres	Visual check	OF Foreman OF Engineer	FM- COL- TDS..... no. of fibres (OK, NOK)
4.2	Online	Check of ink adhesion	1 / coil	Dry and adherent to the fiber	IL 003 QC-FO	Visual check	Colouring line operator	FM- COL- TDS..... no. of fibres (OK, NOK)
4.3	Online	Check for color uniformity and surface quality	100% coils	The color must be uniform and smooth surface	IL-PTF-001	Visual check	Coloring line operator	FM- COL- TDS..... no. of fibres (OK, NOK)
4.4	Offline	Check of ring marking (If applicable)	100% coils	NA	IL-PTF-011	Visual check and metallic tape	Coloring line operator	FM- COL- TDS..... no. of fibres (OK, NOK)
4.5	Offline	Check winding uniformity	100% coils	The winding must be uniform, without cross	IL-PTF-012	Visual check	Coloring line operator	FM- COL- TDS..... no. of fibres (OK, NOK)
4.6	Online	Check length of fiber	100% coils	The length of the coil to comply with launching documents	FL- COL- TDS..... no. of fibres	Visual check	Coloring line operator	FM- COL- TDS..... no. of fibres (OK, NOK)
4.7	Offline	Quality evaluation White or red label applied to the coil, as the case	100% coils	4.1, 4.2, 4.3, 4.4, 4.5, 4.6 with "OK" or "NOT-OK"	PS 7.5.3	-	Coloring line operator	FM- COL- TDS..... no. of fibres (OK, NOK)


FL-COL=Launching Documents, FM-COL=Colouring Measurement Documents

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5. Buffering Loose Tube


Nr.	Type	Characteristic	Frecvency	Acceptance	References	Instrument	Control Authority	Recording
5.1	Input	Raw material or WIP reception (PBT, Gels, MB)	Every raw material batch	Labels from suppliers + QC stamp	PS 7.5.3	Visual check	OF Foreman OF Engineer	FM- BUF- TDS..... no. of fibres (OK, NOK)
5.2	Input	Colored fibres reception	100% coils	Colouring labels with "OK" Launching Documents	ET-COL FL- BUF- TDS..... no. of fibres	Visual check	Buffering operator	FM- BUF- TDS..... no. of fibres (OK, NOK)
5.3	Offline	Check number and optical fiber color	100% coils	no. of pcs. colours	TDS..... CA-no.....	Visual check	Buffering operator	FM- BUF- TDS..... no. of fibres (OK, NOK)
5.4	Online	Tube outer diameter measurement	Continous	Dmin (mm) Dnom (mm) Dmax (mm)	CA-no.....	Zumbach devices	Buffering operator	FM- BUF- TDS..... no. of fibres (OK, NOK)
	Offline		First coil after setup and at lesat on coil per shift	#VALUE! dimension #VALUE!	DP- BUF- TDS..... no. of fibres	Profil Projector		
5.5	Offline	Tube inner diameter measurement	First coil after setup and at lesat on coil per shift	Dmin (mm) Dnom (mm) Dmax (mm) #VALUE! dimension #VALUE!	CA-no..... DP- BUF- TDS..... no. of fibres	Profil Projector	Operator QC (lab.)	FM- BUF- TDS..... no. of fibres (OK, NOK)
5.6	Online	Tube ovality measurement (Dmax-Dmin)	Continous	≤ #VALUE! mm	PCC no.....	Zumbach devices	Buffering operator	FM- BUF- TDS..... no. of fibres (OK, NOK)
5.7	Online	Check tube non-uniformity	Continous	≤ #VALUE! mm	IL-PTF-014	Lump&nek devices	Buffering operator	FM- BUF- TDS..... no. of fibres (OK, NOK)
5.8	Offline	Tube excentricity measurement (gmax-gmin)	Continous	≤ 0,05 mm	PCC no.....	Profil Projector	QC operator (lab.)	FM- BUF- TDS..... no. of fibres (OK, NOK)
5.9	Online	Excess fiber length measurement	Continous	EFL value %	CA-no.....	Line equipment	Buffering operator	FM- BUF- TDS..... no. of fibres (OK, NOK)
5.10	Offline	Tube elongation measurement (When required)	First coil after setup and at lesat on coil per shift	≥ N.A. %	N.A	Tensile test devices	QC operator (lab.)	FM- BUF- TDS..... no. of fibres (OK, NOK)
5.11	Offline	Tube tensile strength measurement (When required)	First coil after setup and at lesat on coil per shift	≥ N.A. Mpa	N.A	Tensile test devices	QC operator (lab.)	FM- BUF- TDS..... no. of fibres (OK, NOK)
5.12	Online	Visual aspect and tube color	Continous	The surface must to be smooth, without irregularities, no burns	IL-PTF-014	Visual check	Buffering operator	FM- BUF- TDS..... no. of fibres (OK, NOK)
	Offline		100% coils	no. of pcs. colours				
5.13	Offline	Check the jelly presence	100% coils	Enough jelly in tube	IL-PTF-013	Visual check	Buffering operator	FM- BUF- TDS..... no. of fibres (OK, NOK)
5.14	Offline	Quality evaluation White or red label applied to the coil, as the case	100% coils	5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11, 5.12, 5.13 with "OK" or "NOT-OK"	PS 7.5.3	-	Buffering operator	FM- BUF- TDS..... no. of fibres (OK, NOK)

FL-BUF= Buffering Launching Documents, DP-BUF=Buffering Process Data , FM-BUF= Buffering Measurement Documents

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6. Intermediate Testing


Nr.	Type	Characteristic	Frecvency	Acceptance	References	Instrument	Control Authority	Recording		
6.1	Input	Buffering tube reception	100% coils	Buffering labels with "OK"	PS 7.5.3	Visual check	OF IT operator	Test report QC OF-F1.2 (OK, NOT OK)		
6.2	Offline	Outer diameter measurement	100% coils	Dmin (mm)	Dnom (mm)	Dmax (mm)	CA-no.....	Visual check	OF IT operator	Test report QC OF-F1.2 (OK, NOT OK)
				#VALUE!	dimension	#VALUE!				
6.3	Offline	Inner diameter measurement	100% coils	Dmin (mm)	Dnom (mm)	Dmax (mm)	CA-no.....	Visual check	OF IT operator	Test report QC OF-F1.2 (OK, NOT OK)
				#VALUE!	dimension	#VALUE!				
6.4	Offline	Check the jelly presence	100% coils	Enough jelly in tube	IL-PTF-013	Visual check	OF IT operator	Test report QC OF-F1.2 (OK, NOT OK)		
6.5	Offline	Check ink adhesion	100% coils	Dry and adherent to the fiber	IL 003 QC-FO	Visual check	OF IT operator	Test report QC OF-F1.2 (OK, NOT OK)		
6.6	Offline	Check number and colour of optical fiber	100% coils	no. of pcs. colours	CA-no.....	Visual check	OF IT operator	Test report QC OF-F1.2 (OK, NOT OK)		
6.7	Offline	Attenuation coefficients measurement	100% coils	max @1310nm	value	dB/Km	IEC 60793-1-40 C SPI/CS/90101/7	Anritsu OTDR	OF IT operator	Test report QC OF-F1.2 (OK, NOT OK)
				average @1550nm	value	dB/Km				
				max @1383nm	value	dB/Km				
				max @1550nm	value	dB/Km				
6.8	Offline	Quality evaluation White or red label applied to the coil, as the case	100% coils	6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7 with "OK" or "NOT-OK"	PS 7.5.3	-	OF IT operator	Test report QC OF-F1.2 (OK, NOT OK)		

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7. Filler Extrusion

Nr.	Type	Characteristic	Frecvency	Acceptance	References	Instrument	Control Authority	Recording
7.1	Input	Raw materials or WIP reception (LDPE)	Every raw material batch	Labels from suppliers + QC stamp , production labels with "OK"	PS 7.5.3	Visual check	OF Foreman OF Engineer	FM- FIL- TDS..... no. of fibres (OK, NOT OK)
7.2	Online	Outer diameter measurement	Continous	Dmin (mm) Dnom (mm) Dmax (mm)	FL- FIL- TDS..... no. of fibres	BETA equipment	YUPIN Operator	FM- FIL- TDS..... no. of fibres
	Offline		First coil after setup and at lesat on coil per shift	#VALUE! dimension #VALUE!		Caliper		(OK, NOT OK)
7.3	Online	Visual aspect and tube color	First coil after setup and at lesat on coil per shift	The surface must to be smooth, without irregularities, no burns	IL-PTF-002	Visual check	YUPIN Operator	FM- FIL- TDS..... no. of fibres
	Offline		100% coils	number colours				(OK, NOT OK)
7.4	Online	Check tube non-uniformity (number of fails)	Continous	≤ #VALUE! mm	IL-PTF-014	Lump&nek devices	YUPIN Operator	FM- FIL- TDS..... no. of fibres (OK, NOT OK)
7.5	Offline	Quality evaluation White or red label applied to the coil, as the case	100% coils	7.1, 7.2, 7.3, 7.4 with "OK" or "NOT-OK"	PS 7.5.3		YUPIN Operator	FM- FIL- TDS..... no. of fibres (OK, NOT OK)


FL-FIL= Filler Launching Documents, DP-FIL= Filler Process Data , FM-FIL= FillerMeasurement Documents

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8. SZ Stranding

Nr.	Type	Characteristic	Frecvency	Acceptance			References				Instrument	Control Authority	Recording			
				Labels from suppliers + QC stamp , production labels with "OK"	Labels from BUF/FIL/TI with "OK" Launching Documents	Labels from BUF/FIL/TI with "OK" Launching Documents	PS 7.5.3	ET-BUF, ET-FIL, ET-TI	FL- ISZ- TDS.....	no. of fibres			OF Foreman OF Engineer	FM- ISZ- TDS.....	no. of fibres	
8.1	Input	Raw material reception (GRP, tapes, jelly)	Every raw material batch	Labels from suppliers + QC stamp , production labels with "OK"			PS 7.5.3				Visual check	OF Foreman OF Engineer	FM- ISZ- TDS.....	no. of fibres	(OK, NOT OK)	
8.2	Input	Tubes/ fillers reception Check tubes color	100% coils	Labels from BUF/FIL/TI with "OK" Launching Documents			ET-BUF, ET-FIL, ET-TI				Visual check	OF ISZ operator	FM- ISZ- TDS.....	no. of fibres	(OK, NOT OK)	
				no. of pcs.	colours	FL- ISZ- TDS.....	no. of fibres									
8.3	Input	GRP diameter measurement	Each drum of GRP	Dmin (mm)	Dnom (mm)	Dmax (mm)	DP- ISZ- TDS.....	no. of fibres	Caliper	OF ISZ operator	FM- ISZ- TDS.....	no. of fibres	(OK, NOT OK)			
				#VALUE!	dimension	#VALUE!										
8.4	Input	Calibrated GRP measurement	Each drum of GRP	Dmin (mm)	Dnom (mm)	Dmax (mm)	DP- ISZ- TDS.....	no. of fibres	Caliper	OF ISZ operator	FM- ISZ- TDS.....	no. of fibres	(OK, NOT OK)			
					N.A											
8.5	Offline	Check color sequence	100% coils	colours			DP- ISZ- TDS.....				Visual check	OF ISZ operator	FM- ISZ- TDS.....	no. of fibres	(OK, NOT OK)	
8.6	Offline	Lay-length and SZ count	First drum after setup and at lesat on drum per shift	Pmin (mm)	Pnom (mm)	Pmax (mm)	DP- ISZ- TDS.....	no. of fibres	Steel measuring tape	OF ISZ operator	FM- ISZ- TDS.....	no. of fibres	(OK, NOT OK)			
				#VALUE!	value	#VALUE!										
8.7	Online	Check tapes overlapping	Continous	The overlap must to be continous, without interstices			IL-PTF-003				Visual check	OF ISZ operator	FM- ISZ- TDS.....	no. of fibres	(OK, NOT OK)	
8.8	Offline	SZ stranding outer diameter measurement	First drum after setup and at lesat on drum per shift	Dimin (mm)	Dinom (mm)	Dimax (mm)	DP- ISZ- TDS.....	no. of fibres	Steel measuring tape	OF ISZ operator	FM- ISZ- TDS.....	no. of fibres	(OK, NOT OK)			
				#VALUE!	value	#VALUE!										
8.9	Online	Check the presence of water blocking element jelly, WB tapes)	Continous	Water blocking element description			IL-PTF-013				Visual check	OF ISZ operator	FM- ISZ- TDS.....	no. of fibres	(OK, NOT OK)	
8.10	Offline	Quality evaluation White or red label applied to the coil, as the case	100% drums	8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, 8.8, 8.9 with "OK" or "NOT-OK"			PS 7.5.3					OF ISZ operator	FM- ISZ- TDS.....	no. of fibres	(OK, NOT OK)	


FL-ISZ= SZ Stranding Launching Documents , DP-ISZ= SZ Stranding Process Data, FM-ISZ= SZ Stranding Measurement Documents

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9. Sheath Extrusion


Nr.	Type	Characteristic	Frecvency	Acceptance	References	Instrument	Control Authority	Recording
9.1	Input	Raw material reception	Every raw material batch	Labels from suppliers + QC stamp	PS 7.5.3	Visual check	OF Foreman OF Engineer	FM- MAN- TDS..... no. of fibres (OK, NOT OK)
9.2	Input	Semi-finished reception from SZ	100%	Labels from ISZ with "OK" Launching Documents	ET-ISZ FL- MAN- TDS..... no. of fibres	Visual check	M2 operator	FM- MAN- TDS..... no. of fibres (OK, NOT OK)
9.3	Input	Check the drum from take-up	100% drums	Wooden drums in good conditions	ST-001-100	Visual check	M2 operator	FM- MAN- TDS..... no. of fibres (OK, NOT OK)
9.4	Online	Outer diameter measurement	Continous	Dmin (mm) Dnom (mm) Dmax (mm)	DP- MAN- TDS..... no. of fibres	Sikora device	M2 operator	FM- MAN- TDS..... no. of fibres (OK, NOT OK)
9.5	Offline	Outer diameter measurement	First drum after setup and at lesat on drum per shift	#VALUE! dimension #VALUE!	DP- MAN- TDS..... no. of fibres	Steel measuring tape	M2 operator	FM- MAN- TDS..... no. of fibres (OK, NOT OK)
9.6	Offline	Sheath wall thickness measurement	First drum after setup and at lesat on drum per shift	Average value mm Absolute value mm	DP- MAN- TDS..... no. of fibres	Profil Projector	QC operator (lab.)	FM- MAN- TDS..... no. of fibres (OK, NOT OK)
9.7	Online	Check ripcord (number, type)	Continous	no. of pcs. ripcord type	DP- MAN- TDS..... no. of fibres	Visual check	M2 operator	FM- MAN- TDS..... no. of fibres (OK, NOT OK)
9.8	Offline	Check mark type	First drum after setup and at lesat on drum per shift	type of marking Colour	DP- MAN- TDS..... no. of fibres	Visual check and steel tape	M2 operator	FM- MAN- TDS..... no. of fibres (OK, NOT OK)
	Offline and Online	Check mark text		Marking text				
9.9	Online	Visual aspect and color	Continous	The surface must be smooth, without irregularities, no burns	IL-PTF-024	Visual check	M2 operator	FM- MAN- TDS..... no. of fibres (OK, NOT OK)
	Offline		100% drums	Colour (RAL)	DP- MAN- TDS..... no. of fibres			
9.10	Online	Check sheath defects (only for steel tapes)	Continous	Without defects, holes, breaks	IL-PTF-026	Spark-tester	M2 operator	FM- MAN- TDS..... no. of fibres (OK, NOT OK)
9.11	Online	Check sheath non-uniformity	Continous	≤ 0,5 mm	IL-PTF-025	Lump&nek devices	M2 operator	FM- MAN- TDS..... no. of fibres (OK, NOT OK)
9.12	Offline	Check water penetration	100% drums	1m sample length, 1m water column, 1 hour test duration. No water leakage	IEC 60794-1-2 F5B	WPT device	M2 operator	FM- MAN- TDS..... no. of fibres (OK, NOT OK)
9.13	Online	Check winding of cable	Continous	The winding must to be uniform, without cross	IL-PTF-012	Visual check	M2 operator	FM- MAN- TDS..... no. of fibres (OK, NOT OK)
9.14	Offline	Quality evaluation White or red label applied to the drum, as the case	100% drums	9.1, 9.2, 9.3, 9.4, 9.5,9.6, 9.7, 9.8, 9.9, 9.10, 9.11, 9.12, 9.13 with "OK" or "NOT-OK"	PS 7.5.3	-	M2 operator	FM- MAN- TDS..... no. of fibres (OK, NOT OK)

FL-MAM=Sheath Extrusion Launching Documents, DP-MAN= Sheath Extrusion Process Data, FM-MAN= Sheath Extrusion Measurement Documents

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10. Final Test Routine Controls

Nr.	Type	Characteristic	Frecvency	Acceptance	References	Instrument	Control Authority	Recording
10.1	Input	Drums reception from M2	100%	Input documents and validated label with "OK"	PS 7.5.3	Visual check	QC final testing operator	Test report QC OF-F2.1 (OK, NOT OK)
10.2	Offline	Check winding and visual aspect of cable	100%	Wooden drums in good conditions The winding must be uniform, without cross	ST-001-100	Visual check	QC final testing operator	Test report QC OF-F2.1 (OK, NOT OK)
10.3	Offline	Visual aspect and color	100%	The sheath must be smooth, without irregularities, no burns	IL-PTF-024	Visual check	QC final testing operator	Test report QC OF-F2.1 (OK, NOT OK)
10.4	Offline	Check mark type	100%	Type of marking	TDS.....	Visual check steel tape	QC final testing operator	Test report QC OF-F2.1 (OK, NOT OK)
		Check mark text		Marking text	CA-no.....			
10.5	Offline	Outer diameter measurement	100%	Dmin (mm) #VALUE! Dnom (mm) dimension Dmax (mm) #VALUE!	CA-no.....	Steel measuring tape	QC final testing operator	Test report QC OF-F2.1 (OK, NOT OK)
10.6	Offline	Sheath wall thickness measurement	100%	Min med value mm Min abs value mm	CA-no.....	Caliper	QC final testing operator	Test report QC OF-F2.1 (OK, NOT OK)
10.7	Offline	Check numbers and colours of tubes	100%	no. of pcs. colours	TDS..... CA-no.....	Visual check	QC final testing operator	Test report QC OF-F2.1 (OK, NOT OK)
10.8	Offline	Check fibers colours	100%	no. of pcs. colours	TDS..... CA-no.....	Visual check	QC final testing operator	Test report QC OF-F2.1 (OK, NOT OK)
10.9	Offline	Check fiber continuity	100%	The fiber must be continue	IL-	Visual check	QC final testing operator	Test report QC OF-F2.1 (OK, NOT OK)
10.10	Offline	Attenuation coefficients measurement	100%	Max. @1310nm value dB/Km	IEC 60793-1-40 C	Anritsu OTDR	QC final testing operator	Test report QC OF-F2.1 (OK, NOT OK)
				Average@1310nm value dB/Km				
				Max. @1550nm value dB/Km				
				Average@1550nm value dB/Km				
10.11	Offline	Water Penetration Test	1/batch min. 1/shift	3m sample length, 1m water column, 24 hour test duration. No water leakage	IEC 60794-1-2 F5B	WPT devices	QC final testing operator	Test report QC OF-F2.1 (OK, NOT OK)
10.12	Offline	Quality evaluation White or red label applied to the drum, as the case	100% drums	10.1, 10.2, 10.3, 10.4, 10.5, 10.6, 10.7, 10.8, 10.9, 10.10, 10.11 with "OK" or "NOT-OK"	PS 7.5.3	-	QC final testing operator	Drum identification
								Final label

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11. Type Tests

Nr.	Type	Characteristic	Frecvency	Acceptance	References	Instrument	Control Authority	Recording
11.1	Offline	Tensile Test (Operation) @1550nm	customer request or approval(homologation)		IEC 60794-1-2 E1 A si B TDS.....	Tensile Test Device	Head of testing laboratory	Raport Tensile Test QC OF-F3.2
11.2	Offline	Tensile Test(Installation) @1550nm	customer request or approval(homologation)		IEC 60794-1-2 E1 A si B TDS.....	Tensile Test Device	Head of testing laboratory	Raport Tensile Test QC OF-F3.2
11.3	Offline	Crush Test @1550nm	customer request or approval(homologation)		IEC 60794-1-2 E3 TDS.....	Crush Test Device	Head of testing laboratory	Raport Crush Test QC OF-F3.1
11.4	Offline	Impact Test @1550nm	customer request or approval(homologation)		IEC 60794-1-2 E4 TDS.....	Impact Test Device	Head of testing laboratory	Raport Impact Test QC OF-F3.0
11.5	Offline	Torsion Test @1550nm	customer request or approval(homologation)		IEC 60794-1-2 E7 TDS.....	Torsion Test Device	Head of testing laboratory	Raport Torsion Test QC OF-F3.4
11.6	Offline	Repeated Bending Test @1550nm	customer request or approval(homologation)		IEC 60794-1-2 E6 TDS.....	Repeated Test Device	Head of testing laboratory	Raport RB Test QC OF-F3.5
11.7	Offline	Kink Test	customer request or approval(homologation)		IEC 60794-1-2 E10 TDS.....	Kink Test Device	Head of testing laboratory	Raport Kink Test QC OF-F3.11
11.8	Offline	Temperature Cycling Test @1550nm	customer request or approval(homologation)		IEC 60794-1-2 F1 TDS.....	Climatic Chamber	Head of testing laboratory	Raport TC Test QC OF-F3.6
11.9	Offline	Drip Test	customer request or approval(homologation)		IEC 60794-1-2 E14 TDS.....	Dry Klin	Head of testing laboratory	Raport Drip Test QC OF-F3.12
11.10	Offline	Bending Radius Under Tension Test @1550nm	customer request or approval(homologation)		IEC 60794-1-2 E18 TDS.....	B.R.U.T Test Device	Head of testing laboratory	Raport B.R.U.T Test QC OF-F3.7
11.11	Offline	Cable Bend Test@1550nm	customer request or approval(homologation)		IEC 60794-1-2 E11-1 TDS.....	Bend Test Device	Head of testing laboratory	Raport Bend Test QC OF-F3.8
11.12	Offline	Tube Kinking	customer request or approval(homologation)		IEC 60794-1-2 E10 TDS.....	Tube Kinking Test Device	Head of testing laboratory	Raport Tube Kinking Test QC OF-F3.11

12. Documents and Records Control

Nr.	Type	Characteristic	Frecvency	Acceptance	References	Instrument	Control Authority	Recording
12.1	Offline	Preparation of test reports	customer request or approval(homologation)	Data corepondence with technical documentation requirements	IEC 60794-1-2 TDS..... CA-no.....	Visual check	Head of testing laboratory QC Manager	Test reports QC OF-F2.0 QC OF-F3.3