FUJIKURA FIBER OPTICS VIET NAM

Form: **0-PR-012-0-Fo-001**

POTENTIAL FAILURE MODE AND EFFECTS ANALYSIS Page: 1/3 Ver: 12

0-PR-012-0-FO-001/12

Kind of FMEA ○ Design FMEA ◉ Process FMEA

Product (or project) Name: P-FMEA of MPO PRODUCT

Product (or project) spec:

Members' signature: *(include 2 cross-function sections at least)*

KhaiND - PRE1 KhaiND_10908 **PhuongNTA - PRE1** **TienCTC-PRE1**

ThangVD - PRE1 **HieuTT - QAE** 10831 13-Aug-24

Prepared by: 10764 13-Aug-24

Approved by: *(Dept./Div. manager's approval for high risk case, other cases can be approved by section managers)* Minh Đức 14-Aug-24

Customer's approval (if required):

Comment: .....

.....

Signature and date:

FMEA Number: 0-PR-012-0-FO-001-4-RC-0071

Version: 13

FMEA Original Date: …19.Dec.2016……

FMEA Revision Date: 13-Aug-2024……

I. CONCLUSION:

Risk was controled and high risk take action and meet require as 0-PR-012(1<RPN<17)

===> Acceptance for mass production

II. ANALYSIS

Item number	Process	Requirements	Requirement classification	Potential Failure Mode	Potential Effect(s) of Failure	Severity	Potential Cause(s) / Failure Mechanism(s)	Occurrence	Current Design or ProcessControls (Prevention/Detection)	Detect	RPN	Recommended Action(s)	Responsibility & Target Completion Date	Actions Taken	Severity	Occurrence	Detect	RPN
1	Cutting	Correct kind of material	(1) Customer's requirement/agreement	Using wrong kind of material	Wrong Structure of product => Customer can't use	4	Engineer design wrong material in BOM list	1	- Cross check by another Engineer - Can detect by cord color	1	4	Risk acceptability	-	-	4	1	1	4
2	Cutting	Correct kind of material	(1) Customer's requirement/agreement	Using wrong kind of material	Wrong Structure of product => Customer can't use	4	The material is issued wrong compare with BOM list	1	- Material is issued by System with source from BOM list	1	4	Risk acceptability	-	-	4	1	1	4
3	Cutting	Correct kind of material	(1) Customer's requirement/agreement	Using wrong kind of material	Wrong Structure of product => Customer can't use	4	The supplier ship wrong material compare with spec	1	- Incoming check the cable compare with spec 1 bobbin per invoid - All cable/cord detail will show in cutting plan software - Operator check the cable/cord before cutting	1	4	Risk acceptability	-	-	4	1	1	4
4	Cutting	Correct kind of material	(1) Customer's requirement/agreement	Using wrong kind of material	Wrong Structure of product => Customer can't use	4	Wrong identify label on Bobbin	1	- All cable/cord detail will show in cutting plan software - Operator check the cable/cord before cutting	1	4	Risk acceptability	-	-	4	1	1	4
5	Cutting	Correct kind of material	(1) Customer's requirement/agreement	Using wrong kind of material	Wrong Structure of product => Customer can't use	4	Operator pick up wrong item number of material in WH	1	- All cable/cord detail will show in cutting plan software - Operator check the cable/cord before cutting - Scan material code by barcode into cutting plan software to judgment	1	4	Risk acceptability	-	-	4	1	1	4
6	Cutting	Using correct material lot no	(3) FOV internal requirement	Using wrong material lot no	Difficulty for tracing data (when trouble happened)	2	Operator pick up wrong material Lot in WH	2	- All cable detail will show in cutting plan software - Operator check the cable before cutting	1	4	Risk acceptability	-	-	2	2	1	4
7	Cutting	Corrected cutting length	(3) FOV internal requirement	The actual cutting length is shorter than spec requirement	FI-Cost to RW/Reject	4	Engineer design wrong cutting length on BOM list	1	- Cross check by another Engineer (Can detect at Length check & Test report checking)	2	8	Risk acceptability	-	-	4	1	2	8
8	Cutting	Corrected cutting length	(3) FOV internal requirement	The actual cutting length is shorter than spec requirement	FI-Cost to RW/Reject	4	Clerk setting wrong cutting length on software	1	- Engineer cross check before approve - System detect the different length of setting with design on BOM list when release MP (Can detect at Length check & Test report checking)	2	8	Risk acceptability	-	-	4	1	2	8

9	Cutting	Corrected cutting length	(3) FOV internal requirement	The actual cutting length is shorter than spec requirement	FI-Cost to RW/Reject	4	The machine performance is not good	2	- Check machine CS daily - Measure sample to confirm the machine performance (Can detect at Length check & Test report checking)	1	8	Risk acceptability	-	-	4	2	1	8
10	Cutting	Corrected cutting length	(3) FOV internal requirement	The actual cutting length is shorter than spec requirement	FI-Cost to RW/Reject	4	Operator setting wrong the cutting parameter	2	- Measure actual cutting length of the first product and judgement by cutting plan software (Can detect at Length check & Test report checking)	1	8	Risk acceptability	-	-	4	2	1	8
11	Cutting	Corrected cutting length	(3) FOV internal requirement	The actual cutting length is shorter than spec requirement	FI-Cost to RW/Reject	4	Operator marking wrong for cutting by Manual (incase cutting by manual)	1	- Cross check mark by another Operator - Measure actual cutting length of the first product and judgement by cutting plan software (Can detect at Length check & Test report checking)	1	4	Risk acceptability	-	-	4	1	1	4
12	Cutting	Corrected cutting length	(3) FOV internal requirement	The actual cutting length is shorter than spec requirement	FI-Cost to RW/Reject	4	The tape quantity not be controlled well when cutting by manual	1	- Apply Jig to control the quantity of Tape - Measure actual cutting length of the first product and judgement by cutting plan software (Can detect at Length check & Test report checking)	1	4	Risk acceptability	-	-	4	1	1	4
13	Cutting	Corrected cutting length	(3) FOV internal requirement	The actual cutting length is longer than spec requirement	FI-Cost to RW/Reject	3	Engineer design wrong cutting length on BOM list	1	- Cross check by another Engineer (Can detect at Length check & Test report checking)	2	6	Risk acceptability	-	-	3	1	2	6
14	Cutting	Corrected cutting length	(3) FOV internal requirement	The actual cutting length is longer than spec requirement	FI-Cost to RW/Reject	3	Clerk setting wrong cutting length on software	1	- Engineer cross check before approve - System detect the different length of setting with design on BOM list when release MP (Can detect at Length check & Test report checking)	2	6	Risk acceptability	-	-	3	1	2	6
15	Cutting	Corrected cutting length	(3) FOV internal requirement	The actual cutting length is longer than spec requirement	FI-Cost to RW/Reject	3	The machine performance is not good	2	- Check machine CS daily - Measure sample to confirm the machine performance (Can detect at Length check & Test report checking)	1	6	Risk acceptability	-	-	3	2	1	6
16	Cutting	Corrected cutting length	(3) FOV internal requirement	The actual cutting length is longer than spec requirement	FI-Cost to RW/Reject	3	Operator setting wrong the cutting parameter	2	- Measure actual cutting length of the first product and judgement by cutting plan software (Can detect at Length check & Test report checking)	1	6	Risk acceptability	-	-	3	2	1	6
17	Cutting	Corrected cutting length	(3) FOV internal requirement	The actual cutting length is longer than spec requirement	FI-Cost to RW/Reject	3	Operator marking wrong for cutting by Manual (incase cutting by manual)	1	- Cross check mark by another Operator - Measure actual cutting length of the first product and judgement by cutting plan software (Can detect at Length check & Test report checking)	1	3	Risk acceptability	-	-	3	1	1	3
18	Cutting	Corrected cutting length	(3) FOV internal requirement	The actual cutting length is longer than spec requirement	FI-Cost to RW/Reject	3	The tape quantity not be controlled well when cutting by manual	1	- Apply Jig to control the quantity of Tape - Measure actual cutting length of the first product and judgement by cutting plan software (Can detect at Length check & Test report checking)	1	3	Risk acceptability	-	-	3	1	1	3
19	Cutting	Corrected cutting quantity	(3) FOV internal requirement	Cutting quantity is more than requirement	High FI-Cost to RW/Reject	3	PRE release wrong the quantity of serial number	1	- The serial quantity have already controlled by System - The product quantity will control by system (ECS)	1	3	Risk acceptability	-	-	3	1	1	3
20	Cutting	Corrected cutting quantity	(3) FOV internal requirement	Cutting quantity is more than requirement	High FI-Cost to RW/Reject	3	PRE control not good for the NG/return serial number	2	- Make clear the rule on delivery and receipt of serial numbers between PRE and PRD - Apply form to record the delivery and receipt of the serial number - The product quantity will control by system (ECS)	1	6	Risk acceptability	-	-	3	2	1	6
21	Cutting	Corrected cutting quantity	(3) FOV internal requirement	Cutting quantity is more than requirement	High FI-Cost to RW/Reject	3	Operator setting wrong the cutting quantity on the cutting machine	1	- Make clear the cutting quantity on Software - The product quantity will control by system (ECS)	1	3	Risk acceptability	-	-	3	1	1	3
22	Cutting	Corrected cutting quantity	(3) FOV internal requirement	Cutting quantity is more than requirement	High FI-Cost to RW/Reject	3	Operator not control the cutting quantity when cut by manual	1	- Make clear the cutting quantity on Software - The product quantity will control by system (ECS)	1	3	Risk acceptability	-	-	3	1	1	3

23	Cutting	Corrected cutting quantity	(3) FOV internal requirement	Cutting quantity is not enough	Delay output	3	PRE release wrong the quantity of serial number	1	- The serial quantity have already controlled by System - The product quantity will control by system (ECS)	1	3	Risk acceptability	-	-	3	1	1	3
24	Cutting	Corrected cutting quantity	(3) FOV internal requirement	Cutting quantity is not enough	Delay output	3	Operator setting wrong the cutting quantity on the cutting machine	1	- Make clear the cutting quantity on Software - The product quantity will control by system (ECS)	1	3	Risk acceptability	-	-	3	1	1	3
25	Cutting	Corrected cutting quantity	(3) FOV internal requirement	Cutting quantity is not enough	Delay output	3	Operator not control the cutting quantity when cut by manual	1	- Make clear the cutting quantity on Software - The product quantity will control by system (ECS)	1	3	Risk acceptability	-	-	3	1	1	3
26	Cutting	Corrected cutting quantity	(3) FOV internal requirement	Cutting quantity is not enough	Delay output	3	Don't have enough stock for material when cutting	1	- Setup safety stock for material - PUR check the material stock before confirm to release ID	1	3	Risk acceptability	-	-	3	1	1	3
27	Cutting	Good appearance of material	(3) FOV internal requirement	Cable/cord was damaged	High FI-Cost to RW/Reject	3	Cable/cord was damaged from Supplier	2	- Cable/cord was protected by Bobbin/reel when ship to FOV - ICM will check the cable/cord before transfer to WH (the checking frequency depend on the product group) - Check cable/cord appearance when cutting (the checking frequency depend on the product	1	6	Risk acceptability	-	-	3	2	1	6
28	Cutting	Good appearance of material	(3) FOV internal requirement	Cable/cord was damaged	High FI-Cost to RW/Reject	3	Cable/cord was damaged when storage at WH	1	- Cable/cord was winded on reel/bobbin with covered by air bubble before storage - Check cable/cord appearance when cutting (the checking frequency depend on the product group)	1	3	Risk acceptability	-	-	3	1	1	3
29	Cutting	Good appearance of material	(3) FOV internal requirement	Cable/cord was damaged	High FI-Cost to RW/Reject	3	Operator not carefully when operation with material	2	- Make clear in JBS instructing Operator the correct method to cut for each material kind - Apply gloves when handling sensitive materials	1	6	Risk acceptability	-	-	3	2	1	6
30	Cutting	Good appearance of material	(3) FOV internal requirement	Cable/cord was damaged	High FI-Cost to RW/Reject	3	Operator setting wrong the cutting machine	2	- Make clear in JBS instructing Operator when inserting cable into machine for cutting - Check machine Check sheet before cutting	1	6	Risk acceptability	-	-	3	2	1	6
31	Cutting	Good appearance of material	(3) FOV internal requirement	Cable/cord was contaminated with impurities	High FI-Cost to RW/Reject	3	Cable/cord was contaminated with impurities before input to production line	2	- ICM will check the cable before transfer to WH (the checking frequency depend on the product group) - Check cable appearance when cutting (the checking frequency depend on the product group)	1	6	Risk acceptability	-	-	3	2	1	6
32	Cutting	Good appearance of material	(3) FOV internal requirement	Cable/cord was contaminated with impurities	High FI-Cost to RW/Reject	3	The machine/Tool/Jig was not cleaned before cutting	1	- Check daily Check sheet for Machine - Make clear common rule for clean machine/tool/Jig on Line	1	3	Risk acceptability	-	-	3	1	1	3
33	Cutting	Good appearance of material	(3) FOV internal requirement	Cable/cord was contaminated with impurities	High FI-Cost to RW/Reject	3	Operator didn't cover the pen carefully	2	- Make clear rule for Operator to cover pen after use	1	6	Risk acceptability	-	-	3	2	1	6
34	Cutting	Correct winding diameter	(3) FOV internal requirement	The winding diameter of product was wrong	Take time to re-winding	2	Engineer design wrong winding diameter	1	- Both clerk and Engineer will follow spec to design the winding diameter. - Clerk make document and then Engineer will cross check again	2	4	Risk acceptability	-	-	2	1	2	4
35	Cutting	Correct winding diameter	(3) FOV internal requirement	The winding diameter of product was wrong	Take time to re-winding	2	Operator setup wrong winding bobbin (manual method)/wrong winding diameter of cutting machine	1	- Make clear the winding diameter on Cutting software - Make clear in JBS instructing Operator the correct method to setting winding diameter	1	2	Risk acceptability	-	-	2	1	1	2
36	Cutting	Release the both tail of product with suitable length for processing in production line	(3) FOV internal requirement	The release length of both cord tail is not suitable for processing	Take time to adjust to correct release length	2	Engineer not mention or setting wrong on Software	2	- Make clear the release length for both side on software	1	4	Risk acceptability	-	-	2	2	1	4

37	Cutting	Attach correct serial label	(3) FOV internal requirement	Attach wrong serial label	Record wrong data of product	3	Operator pick up wrong serial label of other product	1	- Operator check product code and ID before cutting - Scan serial label by barcode into cutting plan program to cutting (Can detect at length check product)	1	3	Risk acceptability	-	-	3	1	1	3
38	Cutting	Attach 1pc serial label for each product	(3) FOV internal requirement	Attach 2pcs serial label in the same product	Delay output	3	Operator mistake in attach serial label	1	- Can detect when scan ECS - Check WIP again if found out surplus product	1	3	Risk acceptability	-	-	3	1	1	3
39	Cutting	Correct 4M data of cutting order	(3) FOV internal requirement	Input wrong lot no. in software	Difficulty for tracing data (when trouble happened)	2	Operator input wrong material Lot no. in software	2	- Material Lot must be scan by Barcode when input to Software - Make clear the instruction for Operator when input data on software	1	4	Risk acceptability	-	-	2	2	1	4
40	Cutting	Correct 4M data of cutting order	(3) FOV internal requirement	Input wrong actual length in software	Could not detect wrong length by software	3	Operator input wrong actual length in software	1	- Make clear the instruction for Operator when input data on software	1	3	Risk acceptability	-	-	3	1	1	3
41	Cutting	Correct 4M data of cutting order	(3) FOV internal requirement	Input wrong cutting data in software	Difficulty for tracing data (when trouble happened)	2	Operator input wrong cutting data in software	1	- Make clear the instruction for Operator when input data on software	2	4	Risk acceptability	-	-	2	1	2	4
42	Mark strip	Correct mark strip length	(3) FOV internal requirement	Surplus/shortage the length (L1, L2, L…, Ln)	Customer is got inconvenience when break out length wrong	3	Set mark wrong position	2	Cross check the mark by 2nd person The break out fiber length wrong can when insert break out tube Cross check at length check	1	6	Risk acceptability	-	-	3	2	1	6
43	Mark strip	Correct mark strip length	(3) FOV internal requirement	Wrong indicator side on the cable	The product is not well-unified in appearance	1	Mis-identify the text direction on cord	2	- Mark clear requirement about indicator side on the cable at appearance process	2	4	Risk acceptability	-	-	1	2	2	4
44	Branching	SST tubes have clear defined row	(3) FOV internal requirement	SST tubes not have clear defined row	Inserting wrong row, impact to unify	2	Make SST Sub assembly not good	2	- Make clear requirement at process spec. - Check 100% with PS by visual	2	8	Risk acceptability	-	-	2	2	2	8
45	Branching	Sub SST not have adhesive spill out	(3) FOV internal requirement	Sub SST have adhesive spill out	Can not insert to SST housing	3	Apply adhesive so much	1	- Check 100% with PS by visual - Can recognize easily: Can not insert SST housing	1	3	Risk acceptability	-	-	3	1	1	3
46	Branching	SST housing and Break out are full of adhesive	(3) FOV internal requirement	SST housing and Break out lack of adhesive	Wrong structure (Tube spill out)	3	Lack of adhesive when fill in SST housing and break out	1	- Check 100% with PS by visual	2	6	Risk acceptability	-	-	3	1	2	6
47	Branching	Correct order fiber color	(3) FOV internal requirement	Incorrect position fiber	Fiber swap	4	Swap fiber due to can not identify order of each fiber	1	- Check arrangement of fiber in furcation tube by jig 100% - Check Ident 100%	1	4	Risk acceptability	-	-	4	1	1	4
48	Branching	Fiber must be straight in branching pipe	(3) FOV internal requirement	Fiber bending	Loss fail	4	Wrong operation	2	- Pull fiber straight when injecting adhesive into branching pipe - Check Loss 100%	1	8	Risk acceptability	-	-	4	2	1	8
49	Branching	Fiber must be not broken	(3) FOV internal requirement	Fiber broken	Loss fail	4	OP use strong force when shaking fiber to mix adhesive completely which causes fiber broken	2	Check by loss system, ident 100%	1	8	Risk acceptability	-	-	4	2	1	8
50	Branching	Fiber must be not broken	(3) FOV internal requirement	Fiber broken	Loss fail	4	Crimp the ring at wrong position	2	Check by loss system, ident 100%	1	8	Risk acceptability	-	-	4	2	1	8

51	Branching	Correct order fiber color	(3) FOV internal requirement	Incorrect position fiber	Fiber swap	4	Swap fiber due to can not identify order of each fiber	1	- Make clear requirement at process spec. - Check Ident 100%	1	4	Risk acceptability	-	-	4	1	1	4
52	Branching	Branching pipe is full of adhesive	(3) FOV internal requirement	Lack of adhesive	Fiber broken	4	Apply lack of adhesvie	1	- Make clear amount of adhesive at process spec. - Check loss 100%	1	4	Risk acceptability	-	-	4	1	1	4
53	Branching	Fiber must be straight in branching pipe	(3) FOV internal requirement	Fiber bending	Loss fail	4	Wrong operation	2	- Pull fiber straight when injecting adhesive into branching pipe - Check Loss 100%	1	8	Risk acceptability	-	-	4	2	1	8
54	Branching	Fiber must be not broken	(3) FOV internal requirement	Fiber broken	Loss fail	4	OP use strong force when shaking fiber to mix adhesive completely which causes fiber broken	2	- Check by loss system, ident 100%	1	8	Risk acceptability	-	-	4	2	1	8
55	Stycast	Adhesive must full fill	(3) FOV internal requirement	Adhsiver overflow	Apperance not good	2	Injection too much (Level of adesiive higher than branching case height or over flow Reinforcing tube)	2	- Check level adhesive over branching case height after inject adhesive the second time. - Check apperance 100% afer curing time.	2	8	Risk acceptability	-	-	2	2	2	8
56	Stycast	Adhesive must full fill	(3) FOV internal requirement	Lack of adhesive	Fiber is not fix firmly, risk of fiber broken	4	Injectiom not enough adhesive (level of adesiive lower than branching case height)	2	- After inject 1first time, waiting 2hours, inject the second time, check level adhesive must over branching case height. Check loss 100%	1	8	Risk acceptability	-	-	4	2	1	8
57	Stycast	Adhesive must full fill	(3) FOV internal requirement	Adhesive have air gap inside	Fiber is not fix firmly, risk of fiber broken	4	Injection too fast	2	- Control manual, request to inject slowly. - Re-inject additional after waiting around 2hours (waiting time 2hours is to air bubble come out). - Check loss 100%	1	8	Risk acceptability	-	-	4	2	1	8
58	Stycast	Adhesive must full fill	(3) FOV internal requirement	Adhesive have air gap inside	Fiber is not fix firmly, risk of fiber broken	4	Adhesive is over lifetime (viscosity too high)	2	- Control the pot life adhesive 45minutes by visual card - Check loss 100%	1	8	Risk acceptability	-	-	4	2	1	8
59	Stycast	Adhesive dry completely	(3) FOV internal requirement	Dry incompletely	Fiber is not fix firmly, risk of fiber broken and unstable optical performance	3	Ratio of mixing adhesive incorrect	2	- Control mixing adhesive by program - Apply stick to check drying condition. - Check loss 100%	1	6	Risk acceptability	-	-	3	2	1	6
60	Stycast	Adhesive dry completely	(3) FOV internal requirement	Dry incompletely	Fiber is not fix firmly, risk of fiber broken and unstable optical performance	2	Mixing 2 adhsive part not completely	2	- Control mixing adhesive by program - Apply stick to check drying condition.	2	8	Risk acceptability	-	-	2	2	2	8
61	Stycast	Adhesive dry completely	(3) FOV internal requirement	Dry incompletely	Fiber is not fix firmly, risk of fiber broken and unstable optical performance	3	Curing time not enough	2	- Visual control the curing (apply card: start time, end time) - Check loss 100%	1	6	Risk acceptability	-	-	3	2	1	6
62	Part insertion	Correct kind of material	(1) Customer's requirement/agreement	Using wrong kind of material	Wrong Structure of product => Customer can't use	4	Engineer design wrong material in BOM list	1	- Cross check by another Engineer (Can detect by appearance connector)	1	4	Risk acceptability	-	-	4	1	1	4
63	Part insertion	Correct kind of material	(1) Customer's requirement/agreement	Using wrong kind of material	Wrong Structure of product => Customer can't use	4	The material is issued wrong compare with BOM list	1	- Material is issued by System with source from BOM list - Check material before part insertion	1	4	Risk acceptability	-	-	4	1	1	4
64	Part insertion	Correct kind of material	(1) Customer's requirement/agreement	Using wrong kind of material	Wrong Structure of product => Customer can't use	4	The supplier ship wrong material compare with spec	1	- Incoming check material with master sample before input to WH (Can detect when make connector and appearance)	1	4	Risk acceptability	-	-	4	1	1	4

65	Part insertion	Correct kind of material	(1) Customer's requirement/agreement	Using wrong kind of material	Swap signal / Can not connect	4	Change new input product but forget to change old material inside material box	2	- Line clearance - Apply jig when part insertion (on jig have identify kind of connector/product) (Can detect identify/appearance process)	1	8	Risk acceptability	-	-	4	2	1	8
66	Part insertion	Correct kind of material	(1) Customer's requirement/agreement	Using wrong kind of material	Swap signal / Can not connect	4	Wrong/swap material with label information on plastic bag when return redundant material to warehouse (warehouse delivery material back to workshop based on label information on plastic bag)	2	- Make clear requirement only return raw redundant material to warehouse and return before closing ID to control material lot and material code (Can detect identify/appearance process)	1	8	Risk acceptability	-	-	4	2	1	8
67	Part insertion	Correct kind of material	(1) Customer's requirement/agreement	Using wrong components	Can not assembly connector	3	Remain material inside material box and refill different material when change new product	2	- Line clearance - Apply jig when part insertion (on jig have identify kind of connector/product)	1	6	Risk acceptability	-	-	3	2	1	6
68	Part insertion	Correct kind of material	(1) Customer's requirement/agreement	Attach wrong serial label	Record wrong data of product	3	Flow out from cutting process	1	- Scan barcode to open process specification for part insertion	1	3	Risk acceptability	-	-	3	1	1	3
69	Part insertion	Correct kind of material	(1) Customer's requirement/agreement	Attach wrong serial label	Record wrong data of product	3	Failure operation in part insertion process	1	- Make clear the requirement in the work shop rule	1	3	Risk acceptability	-	-	3	1	1	3
70	Part insertion	Correct part quantity	(3) FOV internal requirement	Lack of part quantity	Can not make connector (housing)	3	Fulfill is not enough component on part jig	2	- Maker clear requirement check enough quantity on jig before part insertion into document (JBS) (Can detect at housing/polishing)	1	6	Risk acceptability	-	-	3	2	1	6
71	Part insertion	Correct part quantity	(3) FOV internal requirement	Lack of part quantity	Can not make connector (housing)	3	Component fall out during transportation to next process	2	- Fix component on product when transportation to next process by magic tape (Can detect at housing/polishing)	1	6	Risk acceptability	-	-	3	2	1	6
72	Part insertion	Correct part quantity	(3) FOV internal requirement	Lack of part quantity	Can not make connector (housing)	3	Mistake control quantity component when part by manual without jig (skip using jig)	2	- Apply jig when part insertion (Can detect at housing/polishing)	1	6	Risk acceptability	-	-	3	2	1	6
73	Part insertion	Correct part quantity	(3) FOV internal requirement	Odd of part quantity but can not assembly connector	Can not make connector (housing)	3	Components were fell out during transportation next process then part odd quantity by manual without cross check	2	- Make clear requirement when detect fell out material which need to issued non-confirming and product need to re-check by part insertion process into document (JBS) - Fix component on product when transportation to next process by magic tape (Can detect at next process)	1	6	Risk acceptability	-	-	3	2	1	6
74	Part insertion	Correct part quantity	(3) FOV internal requirement	Odd of part quantity but can not assembly connector	Can not make connector (housing)	3	Part odd quantity by manual and not control quantity component	2	- Apply jig when part insertion (Can detect at next process)	1	6	Risk acceptability	-	-	3	2	1	6
75	Part insertion	Part correct in order	(3) FOV internal requirement	Wrong component position of part order	Can not make connector (housing)	3	Mistake control order of component when part by manual without jig	2	- Apply jig when part insertion (Can detect at Housing/polishing)	1	6	Risk acceptability	-	-	3	2	1	6
76	Part insertion	Part correct in order	(3) FOV internal requirement	Wrong component position of part order	Can not make connector (housing)	3	Components were fell out during transportation next process then part odd quantity by manual without cross check	2	- Make clear requirement when detect fell out material which need to issued non-confirming and product need to re-check by part insertion process into document (JBS) - Fix component on product when transportation to next process by magic tape (Can detect at Housing/polishing)	1	6	Risk acceptability	-	-	3	2	1	6
77	Part insertion	Correct direction of part	(3) FOV internal requirement	Part in reverse order by part components	Can not make connector	3	Mistake control direction when part by manual	2	- Apply jig when part insertion (Can detect at Housing/polishing)	1	6	Risk acceptability	-	-	3	2	1	6
78	Part insertion	Correct direction of part	(3) FOV internal requirement	Part in reverse order by part components	Can not make connector	3	Components were fell out during transportation next process then part by manual without cross check	2	- Make clear requirement when detect fell out material which need to issued non-confirming and product need to re-check by part insertion process into document (JBS) - Fix component on product when transportation to next process by magic tape/sponge/...	1	6	Risk acceptability	-	-	3	2	1	6

79	Part insertion	Using correct material lot no	(3) FOV internal requirement	Using wrong material lot no	Loss big expend/ Difficulty for tracing data (when trouble happened)	1	Change product ID but forget to change lot material and material label based on product ID	2	- Control quantity and lot no of material by ECS based on product ID - Change material lot and actual label together when change new lot/ID at material cabinet on table when using	2	4	Risk acceptability	-	-	1	2	2	4
80	Part insertion	Using correct material lot no	(3) FOV internal requirement	Using wrong material lot no	Loss big expend/ Difficulty for tracing data (when trouble happened)	1	Input new material lot to production line but current material lot not finished yet all lines (1 material lot produce on many production lines and finished time for current material lot is not same)	2	- Distribute remain material of ID to other lines to finish a lot before changing to new lot.	2	4	Risk acceptability	-	-	1	2	2	4
81	Part insertion	Correct length of jacket remove	(3) FOV internal requirement	Short length of jacket remove	Can not make connector (housing)	3	Operator remove jacket without apply jig to control length	1	- Make clear the requirement in PS - Use the jig to support (Can detect when housing)	1	3	Risk acceptability	-	-	3	1	1	3
82	Part insertion	Correct length of jacket remove	(3) FOV internal requirement	Long length of jacket remove	Fiber bending inside connector	3	Operator remove jacket without apply jig to control length	1	- Make clear the requirement in PS - Use the jig to support (Can detect at Loss inspection)	2	6	Risk acceptability	-	-	3	1	2	6
83	Part insertion	Fiber no damage	(3) FOV internal requirement	Fiber got mechanical damage (scratch, chip, break)	Fiber broken outside	4	Strip wrong position on nipper	1	- Make clear the requirement in PS (Can detect at Loss inspection)	1	4	Risk acceptability	-	-	4	1	1	4
84	Part insertion	Correct kevlar length cutting	(3) FOV internal requirement	Short length of Kevlar	Not strong in keep connector	3	Operation failure	2	- Make clear the requirement in PS - Sampling check length of kevlar (Can detect when housing)	1	6	Risk acceptability	-	-	3	2	1	6
85	Part insertion	Correct kevlar length cutting	(3) FOV internal requirement	Long length of Kevlar	Take time to cut again when housing	1	Operation failure	2	- Make clear the requirement in PS - Sampling check length of kevlar (Can detect when housing)	1	2	Risk acceptability	-	-	1	2	1	2
86	MT boot insertion	Insert correct layer ribbon in MT boot	(3) FOV internal requirement	Insert wrong layer ribbon in MT boot	Fiber swap	4	Opearator insert wrong layer ribbon into boot	2	- Mark on fiber to ident layer 1,2 on ribbon - Ident system check 100% to detect - Apply red light to confirm (for SWR Trunk cable only)	1	8	Risk acceptability	-	-	4	2	1	8
87	MT boot conversion insertion (For SWR fiber)	Fiber is damage by edge of boot conversion	(3) FOV internal requirement	Fiber isn't damage by edge of boot conversion	Fiber broken inside MT	4	Boot is move over bare fiber	2	-Apply Hi super 5 to fix boot conversion position to prevent it toughs to bare fiber. -Loss measurement 100% to detect	1	8	Risk acceptability	-	-	4	2	1	8
88	Gathering (For SWR fiber)	Can move boot conversion to stripping point	(3) FOV internal requirement	Can't move boot conversion to stripping point	Can't make ferrule assembly	3	FAA-03 adhesive is cover stripping point ~ 30mm fiber is gathered	2	Make process spec to gather fiber length 15~20mm so that we can move boot to stripping point	1	6	Risk acceptability	-	-	3	2	1	6
89	Gathering	Correct fiber order	(3) FOV internal requirement	In-correct fiber order	Fiber swap	4	Operator's mistake	2	-Check fiber arrangement under Microscope with monitor after gathering - Apply Ident 100% to detect	1	8	Risk acceptability	-	-	4	2	1	8
90	Gathering	Correct making point	(3) FOV internal requirement	In-correct Marking position	Wrong stripping length	4	Operator's mistake	1	- Use template for marking	1	4	Risk acceptability	-	-	4	1	1	4
91	Epotek mixing	Fiber fix well with ferrule	(3) FOV internal requirement	Adhesive harden not completely	Fiber broken inside ferrule (loss main function)	4	Mixing wrong ratio	2	- Control the mixing ratio by program - Make clear the requirement in PS	1	8	Risk acceptability	-	-	4	2	1	8
92	Epotek mixing	Fiber fix well with ferrule	(3) FOV internal requirement	Adhesive harden not completely	Fiber broken inside ferrule (loss main function)	4	Mixing not correct condition	2	- Control the mixing time by program - Make clear the requirement in PS	1	8	Risk acceptability	-	-	4	2	1	8

93	Epotek mixing	Fiber fix well with ferrule	(3) FOV internal requirement	Adhesive harden not completely	Fiber broken inside ferrule (loss main function)	4	Using epotek over expired date	2	- Control the pot life of adhesive by program - Make clear the requirement in PS	1	8	Risk acceptability	-	-	4	2	1	8
94	Epotek mixing	Fiber fix well with ferrule	(3) FOV internal requirement	Air bubble inside adhesive	Fiber broken inside ferrule (loss main function)	4	De-gas time not enough	2	- Apply de-gas after mixing and check air bubble before injection	1	8	Risk acceptability	-	-	4	2	1	8
95	Epotek mixing	Fiber fix well with ferrule	(3) FOV internal requirement	Fiber got mechanical damage (scratch, chip, break)	Fiber broken inside ferrule (loss main function)	4	Using adhesive over pot life	2	- Make clear the requirement in PS	1	8	Risk acceptability	-	-	4	2	1	8
96	Epotek mixing	Record correct 4M	(3) FOV internal requirement	Record wrong 4M	Trace 4M information wrong	3	No information of lot/batch under using	2	- Scan the barcode and record by program	1	6	Risk acceptability	-	-	3	2	1	6
97	Ferrule assembly	Not Twice cutting bare fiber	(3) FOV internal requirement	Twice cutting bare fiber	Fiber broken	3	Operational failure	2	- Standardize operation of OP by JBS - Loss system can detect fiber broken	1	6	Risk acceptability	-	-	3	2	1	6
98	Ferrule assembly	Epotek doesn't overflow to guide pin hole	(3) FOV internal requirement	Epotek overflow to guide pin hole	Connection failure	2	Optical loss failure	2	- 100% appearance inspection at guide hole after finish ferrule Ass'y under microscope	2	8	Risk acceptability	-	-	2	2	2	8
99	Ferrule assembly	Enough epotek inside fiber hole	(3) FOV internal requirement	Lack of epotek inside fiber hole	Optical peformance failure and Polishing failure (Fiber crack)	2	Operational failure	2	- Standardize operation of OP by JBS - Apply vacuum to help epotek fullfil in fiber hole - Endface process can detect lack of adhesive	2	8	Risk acceptability	-	-	2	2	2	8
100	Ferrule assembly	No epotek flow out of MT boot conversion	(3) FOV internal requirement	Epotek flow out of MT boot conversion	Not meet customer requirement	2	Boot conversion had big gap more than nornal MT boot	2	- Standardize operation of OP by JBS by apply epotek slowly and waiting 3 mins before inject more epotek into MT window	2	8	Risk acceptability	-	-	2	2	2	8
101	Ferrule assembly	Fiber fix well with ferrule	(3) FOV internal requirement	Fiber got mechanical damage (scratch, chip, break)	Fiber broken inside ferrule (loss main function)	4	Lack of adhesive inside ferrule	2	- Control epotek injection condition by machine - Check adhesive at the flange end and ferrule tip after injection	1	8	Risk acceptability	-	-	4	2	1	8
102	Ferrule assembly	Bare fiber no damage	(3) FOV internal requirement	Fiber got mechanical damage (scratch, chip, break)	Fiber broken inside ferrule (loss main function)	4	Air bubble inside ferrule	2	- Apply de-gas after mixing and check air bubble before injection - Control epotek injection condition by machine	1	8	Risk acceptability	-	-	4	2	1	8
103	Ferrule assembly	No adhesive on ferrule zirconia body	(3) FOV internal requirement	Adhesive on ferrule body	Connecting function fail	3	Over adhesive when vacuum suction (manual suction)	1	- Control suction condition: time and pressure (Apply ring gauge checking after curing)	2	6	Risk acceptability	-	-	3	1	2	6
104	Ferrule assembly	Bare fiber no damage	(3) FOV internal requirement	Fiber got mechanical damage (scratch, chip, break)	Fiber broken inside ferrule (loss main function)	4	Stripper blade defect: - Mis-aligned, burr, small diameter	1	- Periodically check stripper performance as daily check sheet	1	4	Risk acceptability	-	-	4	1	1	4
105	Ferrule assembly	Bare fiber no damage	(3) FOV internal requirement	Fiber got mechanical damage (scratch, chip, break)	Fiber broken inside ferrule (loss main function)	4	Heating part of stripper NG: - Not suitable temperature - Not suitable control time	1	- Periodically check stripper performance as daily check sheet	1	4	Risk acceptability	-	-	4	1	1	4
106	Ferrule assembly	Bare fiber no damage	(3) FOV internal requirement	Fiber got mechanical damage (scratch, chip, break)	Fiber broken inside ferrule (loss main function)	4	Holder alignment NG: - Not alighted with blade - Not fix firmly on stripper	1	- Check alignment and loosen status requirement in daily check sheet.	2	8	Risk acceptability	-	-	4	1	2	8

107	Ferrule assembly	Bare fiber no damage	(3) FOV internal requirement	Fiber got mechanical damage (scratch, chip, break)	Fiber broken inside ferrule (loss main function)	4	Holder alignment NG: Use unsuitable holder	1	- Standardize kind of holder & fiber & stripper	2	8	Risk acceptability	-	-	4	1	2	8
108	Ferrule assembly	Bare fiber no damage	(3) FOV internal requirement	Fiber got mechanical damage (scratch, chip, break)	Fiber broken inside ferrule (loss main function)	4	Not enough time of fiber in hot stripper	1	- Make clear requirement in JBS (don't strip if stripper still red light) / Timer of stripper	2	8	Risk acceptability	-	-	4	1	2	8
109	Ferrule assembly	Bare fiber no damage	(3) FOV internal requirement	Fiber got mechanical damage (scratch, chip, break)	Fiber broken inside ferrule (loss main function)	4	Coating still remained on the blade when stripping, cause the fiber scratch	2	- Cleaning blade by brush after each stripping time (mention in PS)	1	8	Risk acceptability	-	-	4	2	1	8
110	Ferrule assembly	Fiber was well protect from environment	(3) FOV internal requirement	Fiber was infected by the moister	Loss characteristic impacted	3	Keep bare fiber over time in environment	1	- Set timer to control by each stand jig	1	3	Risk acceptability	-	-	3	1	1	3
111	Ferrule assembly	Bare fiber with correct length	(3) FOV internal requirement	Bare fiber is shorter than spec	Loss failed	4	Operator set fiber wrong position inside stripper	2	- Sampling check stripping length - Has mark point in stripper to guide operator set fiber position - Show the requirement in PS & JBS (Can detect at Loss inspection)	1	8	Risk acceptability	-	-	4	2	1	8
112	Ferrule assembly	Fiber is cleaned completely	(3) FOV internal requirement	UV coat / Dust remaining of bare fiber	Fiber broken inside ferrule (loss main function)	4	Clean wrong position, time & direction	1	- Make clear requirement in PS & JBS - Operator is trained based on the PS & JBS (Can detect at Loss inspection)	1	4	Risk acceptability	-	-	4	1	1	4
113	Ferrule assembly	Fiber is cleaned completely	(3) FOV internal requirement	UV coat / Dust remaining of bare fiber	Fiber broken inside ferrule (loss main function)	4	Touch to the area of bare fiber inside ferrule by hand	1	- Make clear cleaning requirement for handling fiber position and cleaning fiber position and its meaning in the PS, JBS (Can detect at Loss inspection)	1	4	Risk acceptability	-	-	4	1	1	4
114	Ferrule assembly	Fiber is cleaned completely	(3) FOV internal requirement	UV coat / Dust remaining of bare fiber	Fiber broken inside ferrule (loss main function)	4	-Dust was not completely removed by using not good dusper	1	- Make clear cleaning requirement of using alcohol in the PS, JBS (Can detect at Loss inspection)	1	4	Risk acceptability	-	-	4	1	1	4
115	Ferrule assembly	Bare fiber no damage	(3) FOV internal requirement	Fiber got mechanical damage (scratch, chip, break)	Fiber broken inside ferrule (loss main function)	4	Use one dusper for more than 1 fiber	1	- Make clear requirement in PS & JBS - Operator is trained based on the PS & JBS (Can detect at Loss inspection)	2	8	Risk acceptability	-	-	4	1	2	8
116	Ferrule assembly	Bare fiber no damage	(3) FOV internal requirement	Fiber got mechanical damage (scratch, chip, break)	Fiber broken inside ferrule (loss main function)	4	Use at the same position on dusper everytime cleaning	1	- Make clear requirement in PS & JBS - Operator is trained based on the PS & JBS (Can detect at Loss inspection)	2	8	Risk acceptability	-	-	4	1	2	8
117	Ferrule assembly	Bare fiber no damage	(3) FOV internal requirement	Fiber got mechanical damage (scratch, chip, break)	Fiber broken inside ferrule (loss main function)	4	Alcohol got impurity	1	- Use brand-new alcohol for cleaning fiber, not recycle (Can detect at Loss inspection)	2	8	Risk acceptability	-	-	4	1	2	8
118	Ferrule assembly	Bare fiber no damage	(3) FOV internal requirement	Fiber got mechanical damage (scratch, chip, break)	Fiber broken inside ferrule (loss main function)	4	Dust on dusper	1	- Store dusper in the box when using then cover the box when not using.	2	8	Risk acceptability	-	-	4	1	2	8
119	Ferrule assembly	Can detect fiber damage (if any)	(3) FOV internal requirement	Can not detect fiber damage	Fiber broken inside ferrule (loss main function)	4	-Keep fiber wrong position	1	- Make clear screening requirement and its meaning in training document (Can detect at Loss inspection)	1	4	Risk acceptability	-	-	4	1	1	4
120	Ferrule assembly	Can detect fiber damage (if any)	(3) FOV internal requirement	Can not detect fiber damage	Fiber broken inside ferrule (loss main function)	4	Bend fiber wrong angle & direction	1	- Make clear screening requirement and its meaning in training document (Can detect at Loss inspection)	1	4	Risk acceptability	-	-	4	1	1	4

121	Ferrule assembly	Can detect fiber damage (if any)	(3) FOV internal requirement	Can not detect fiber damage	Fiber broken inside ferrule (loss main function)	4	Screening speed so fast	1	- Make clear screening requirement and its meaning in training document (Can detect at Loss inspection)	1	4	Risk acceptability	-	-	4	1	1	4
122	Ferrule assembly	Bare fiber no damage	(3) FOV internal requirement	Fiber got mechanical damage (scratch, chip, break)	Fiber broken inside ferrule (loss main function)	4	-Touch to the area of bare fiber inside ferrule by hand	1	- Make clear Screening requirement and its meaning in training document (Can detect at Loss inspection)	1	4	Risk acceptability	-	-	4	1	1	4
123	Ferrule assembly	Correct Stripping position	(3) FOV internal requirement	Strip wrong position	Fiber broken inside ferrule (loss main function)	4	Operator mistake with strip wrong position	1	- Make clear requirement in training document (Can detect at Loss inspection)	1	4	Risk acceptability	-	-	4	1	1	4
124	Ferrule assembly	Correct marking position	(3) FOV internal requirement	Mark wrong position	Fiber broken inside ferrule (loss main function)	4	Operator use wrong marking template	1	- Make clear marking requirement in training document (Can detect at Loss inspection)	1	4	Risk acceptability	-	-	4	1	1	4
125	Ferrule assembly	Correct kind of material	(3) FOV internal requirement	Using wrong kind of material	Reduce product performance	3	Operator pick up LC ferrule of other product to assembly	1	- Check ID number on ferrule jig before assembly (Can detect at Loss inspection)	1	3	Risk acceptability	-	-	3	1	1	3
126	Ferrule assembly	Ferrule was keep well inside Retainer	(3) FOV internal requirement	Wrong position of Ferrule Top	Connecting function fail	3	Operator insert ferrule top not completely	2	- Apply tool to support - Make clear the requirement in PS & JBS (Can detect at Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
127	Ferrule assembly	Correct position of ferrule color	(1) Customer's requirement/agreement	Wrong ferrule color with fiber color	Not meet customer requirement	3	Clerk make document wrong	2	- Engineer cross check before approve (Can detect at Housing/ Identification process)	1	6	Risk acceptability	-	-	3	2	1	6
128	Ferrule assembly	Correct position of ferrule color	(1) Customer's requirement/agreement	Wrong ferrule color with fiber color	Not meet customer requirement	3	Operator insert wrong ferrule color	2	- Make clear the requirement in PS (Can detect at Housing/ Identification process)	1	6	Risk acceptability	-	-	3	2	1	6
129	Ferrule assembly	Bare fiber no damage	(3) FOV internal requirement	Fiber got mechanical damage (scratch, chip, break)	Fiber broken inside ferrule (loss main function)	4	Operator mistake when insert fiber into ferrule: -Insert fiber not straight (bare fiber touch to flange part) or rotate -Fast fiber insertion -Insert fiber over 1 time to ferrule	1	- Make clear the requirement in JBS (Can detect at Loss inspection)	2	8	Risk acceptability	-	-	4	1	2	8
130	Ferrule assembly	Bare fiber no damage	(3) FOV internal requirement	Fiber got mechanical damage (scratch, chip, break)	Fiber broken inside ferrule (loss main function)	4	Operator re-use ferrule to insert fiber	1	- Don't re-use ferrule to insert fiber - Make clear this requirement in workshop rule (Can detect at Loss inspection)	2	8	Risk acceptability	-	-	4	1	2	8
131	Ferrule assembly	Bare fiber no damage	(3) FOV internal requirement	Fiber got mechanical damage (scratch, chip, break)	Fiber broken inside ferrule (loss main function)	4	Operator insert over mark position	1	- Make clear the requirement in PS & JBS (Can detect at Loss inspection)	2	8	Risk acceptability	-	-	4	1	2	8
132	Ferrule assembly	Bare fiber no damage	(3) FOV internal requirement	Fiber got mechanical damage (scratch, chip, break)	Fiber broken inside ferrule (loss main function)	4	Ferrule hole have contamination or burr	1	- Apply screen test and contamination check when develop new ferrule to qualify ferrule quality (Can detect at Loss inspection)	2	8	Risk acceptability	-	-	4	1	2	8
133	Ferrule assembly	Bare fiber no damage	(3) FOV internal requirement	Fiber got mechanical damage (scratch, chip, break)	Fiber broken inside ferrule (loss main function)	4	Ferrule hole is small	1	- Monitor ferrule hard insertion ratio daily - Train operator hard insertion feeling to stop if insert abnormal - No insert fiber/ ferrule 2 times (Can detect at Loss inspection)	1	4	Risk acceptability	-	-	4	1	1	4
134	Ferrule assembly	Record correct 4M	(3) FOV internal requirement	Record wrong 4M	Trace 4M information wrong	3	Record not correct 4M Scan barcode of product serial not on time	1	- Make clear this requirement in workshop rule	2	6	Risk acceptability	-	-	3	1	2	6

135	Ferrule assembly	Bare fiber no damage	(3) FOV internal requirement	Fiber got mechanical damage (scratch, chip, break)	Fiber broken inside ferrule (loss main function)	4	External force during epoxy curing	1	- Make clear requirement in training document: No extra force after setting, set ferrule in heater (Can detect at Loss inspection)	2	8	Risk acceptability	-	-	4	1	2	8
136	Ferrule assembly	Adhesive harden completely	(3) FOV internal requirement	Adhesive harden not completely	Fiber broken inside ferrule (loss main function)	4	Heating wrong condition temperature & time	1	- Make clear heating condition on PS - Check color of adhesive after curing	1	4	Risk acceptability	-	-	4	1	1	4
137	Ferrule assembly	Adhesive harden completely	(3) FOV internal requirement	Adhesive harden not completely	Fiber broken inside ferrule (loss main function)	4	The machine performance is not good	1	- Check heater follow daily and weekly checksheet (Can detect at Loss inspection)	1	4	Risk acceptability	-	-	4	1	1	4
138	Ferrule assembly	Ferrule can moving inside housing properly	(3) FOV internal requirement	Ferrule cannot move back	Hard connection force -> Endface damage	3	Adhesive flow out on flange end when heating	2	- Check ferrule sleeve close with ferrule flange - Ferrule moving check	1	6	Risk acceptability	-	-	3	2	1	6
139	Ferrule assembly	Fiber is not damage	(3) FOV internal requirement	Fiber was damage inside ferrule tip by the cutting protrusion	Endface NG/Fiber broken	3	Operator cut wrong operation	1	Standardize operation: - Manual: slice and press gentle - Automation: Push ferrule into Combination tool slowly	1	3	Risk acceptability	-	-	3	1	1	3
140	Polishing	Fiber no broken	(2) Common standard	Fiber got mechanical damage (scratch, chip, break)	Fiber broken outside	4	Mechanical damage by operator mistake	2	- Check after polishing (Can detect at Loss inspection)	1	8	Risk acceptability	-	-	4	2	1	8
141	Polishing	Good Endface	(1) Customer's requirement/agreement	Scratch or Chipping at ferrule surface	Insertion loss, return loss performance down	3	Wrong polishing condition (force, speed, time)	2	- Make clear the requirement in PS - Check endface after polishing and final end face (Can detect at Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
142	Polishing	Good Endface	(1) Customer's requirement/agreement	Scratch or Chipping at ferrule surface	Insertion loss, return loss performance down	3	Using wrong rubber pad	2	- Make clear the requirement in PS - Check endface after polishing and final end face (Can detect at Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
143	Polishing	Good Endface	(1) Customer's requirement/agreement	Scratch or Chipping at ferrule surface	Insertion loss, return loss performance down	3	Polishing wrong step	2	- Make clear the requirement in PS - Check endface after polishing and final end face (Can detect at Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
144	Polishing	Good Endface	(1) Customer's requirement/agreement	Scratch or Chipping at ferrule surface	Insertion loss, return loss performance down	3	Using wrong polishing jig	2	- Make clear the requirement in PS - Check endface after polishing and final end face (Can detect at Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
145	Polishing	Good Endface	(1) Customer's requirement/agreement	Scratch or Chipping at ferrule surface	Insertion loss, return loss performance down	3	Machine performance not good	2	- Follow daily check sheet of machine - Check endface after polishing and final end face (Can detect at Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
146	Polishing	Good Endface	(1) Customer's requirement/agreement	Scratch or Chipping at ferrule surface	Insertion loss, return loss performance down	3	Using wrong polishing film	2	- Make clear the requirement in PS - Check endface after polishing and final end face (Can detect at Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
147	Polishing	Good Endface	(1) Customer's requirement/agreement	Scratch or Chipping at ferrule surface	Insertion loss, return loss performance down	3	Quality of polishing film not good	2	- Check endface after polishing and final end face - Monitor the defect ratio of process to improve (Can detect at Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
148	Polishing	Good Endface	(1) Customer's requirement/agreement	Scratch or Chipping at ferrule surface	Insertion loss, return loss performance down	3	Polishing film was use many time	2	- Make clear the requirement in PS - Check endface after polishing and final end face (Can detect at Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6

149	Polishing	Good Endface	(1) Customer's requirement/agreement	Scratch or Chipping at ferrule surface	Insertion loss, return loss performance down	3	Using wrong surface of polishing film	2	- Make clear the requirement in PS - Check endface after polishing and final end face (Can detect at Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
150	Polishing	Good Endface	(1) Customer's requirement/agreement	Scratch or Chipping at ferrule surface	Insertion loss, return loss performance down	3	Cleaning not good	2	- Make clear the requirement in PS - Check endface after polishing and final end face (Can detect at Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
151	Polishing	Good Endface	(1) Customer's requirement/agreement	Scratch or Chipping at ferrule surface	Insertion loss, return loss performance down	3	Fill water not enough, fill liquid not enough	2	- Make clear the requirement in PS and auto supply water - Check endface after polishing and final end face (Can detect at Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
152	Polishing	Good Endface	(1) Customer's requirement/agreement	Scratch or Chipping at ferrule surface	Insertion loss, return loss performance down	3	Ferrule endface impact to tool/jig	2	- Check endface after polishing and final end face (Can detect at Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
153	Polishing	Good Endface	(1) Customer's requirement/agreement	Polishing not completely	Insertion loss, return loss performance down	3	Insert ferrule in polishing jig not completely	2	- Make clear the requirement in PS - Check endface after polishing and final end face (Can detect at Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
154	Polishing	Good Endface	(1) Customer's requirement/agreement	Polishing not completely	Insertion loss, return loss performance down	3	Polishing force not equal due to different length of ferrule	2	- Check ferrule length after insert in polishing jig (Can detect by Inter checking & Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
155	Polishing	Good Endface	(1) Customer's requirement/agreement	Polishing not completely	Insertion loss, return loss performance down	3	Adhesive on ferrule tap or ferrule body	2	- Make clear the requirement in PS - Check endface after polishing and final end face (Can detect at Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
156	Polishing	Good Endface	(1) Customer's requirement/agreement	Two faced/chamfer at ferrule surface	Insertion loss, return loss performance down	3	Re-polishing by final step only	2	-Operator follow requirement in PS, not apply only final polishing step for repo. - Check endface after polishing and final end face	1	6	Risk acceptability	-	-	3	2	1	6
157	Polishing	Meet spec of Inter	(1) Customer's requirement/agreement	Fail Radius of Curvature / Fiber height /Apex Offset	Insertion loss, Return loss impacted	3	Polishing force not equal due to different length of ferrule	2	- Check ferrule length after insert in polishing jig (Can detect by Inter checking & Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
158	Polishing	Meet spec of Inter	(1) Customer's requirement/agreement	Fail Radius of Curvature / Fiber height /Apex Offset	Insertion loss, Return loss impacted	3	Rubber pad not good	2	- Monitor process defect to improvement (Can detect by Inter checking & Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
159	Polishing	Meet spec of Inter	(1) Customer's requirement/agreement	Fail Radius of Curvature / Fiber height /Apex Offset	Insertion loss, Return loss impacted	3	Ferrule not fix strong in polishing jig	2	- Make clear requirement in PS and training to operator - Monitor process defect to improvement (Can detect by Inter checking & Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
160	Polishing	Meet spec of Inter	(1) Customer's requirement/agreement	Fail Radius of Curvature / Fiber height /Apex Offset	Insertion loss, Return loss impacted	3	Polisher machine stable not good	2	- Follow daily check sheet of machine (Can detect by Inter checking & Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
161	Polishing	Meet spec of Inter	(1) Customer's requirement/agreement	Fail Radius of Curvature / Fiber height /Apex Offset	Insertion loss, Return loss impacted	3	Set ferrule on polishing jig not balance	2	- Make clear requirement in PS and training to operator - Monitor process defect to improvement (Can detect by Inter checking & Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
162	Polishing	Meet spec of Inter	(1) Customer's requirement/agreement	Fail Radius of Curvature / Fiber height /Apex Offset	Insertion loss, Return loss impacted	3	Adhesive on ferrule body	2	- Check ferrule length after insert in polishing jig (Can detect by Inter checking & Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6

163	Polishing	Meet spec of Inter	(1) Customer's requirement/agreement	Fail Radius of Curvature / Fiber height /Apex Offset	Insertion loss, Return loss impacted	3	Not clean polishing jig before insert ferrule	2	- Make clear requirement in PS and training to operator - Monitor process defect to improvement (Can detect by Inter checking & Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
164	Polishing	Meet spec of Ferrule length	(1) Customer's requirement/agreement	Short ferrule length	Insertion loss performance down	3	Wrong polishing condition (force, speed, time)	2	- Make clear the requirement in PS - Check endface after polishing and final end face (Can detect at Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
165	Polishing	Meet spec of Ferrule length	(1) Customer's requirement/agreement	Short ferrule length	Insertion loss performance down	3	Not balance on polishing jig	2	- Make clear the requirement in PS - Check endface after polishing and final end face (Can detect at Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
166	Polishing	Meet spec of Ferrule length	(1) Customer's requirement/agreement	Endface dirty	Insertion loss, RL impacted	3	Re-polishing many time	2	- Measure length of ferrule before re-polishing - Check endface at polishing and final endface (Can detect at Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
167	Endface after polishing	Detect all case of endface fail	(3) FOV internal requirement	Couldn't detect product has endface fail	Insertion loss, return loss performance down	3	Machine performance not good	1	- Follow daily check sheet of machine - Check again with master sample - Check endface at polishing and final endface (Can detect at Loss inspection)	1	3	Risk acceptability	-	-	3	1	1	3
168	Endface after polishing	Detect all case of endface fail	(3) FOV internal requirement	Couldn't detect product has endface fail	Insertion loss, return loss performance down	3	Miss judgment in checking	2	- Make clear the requirement in PS - Operator was trained and qualify for this process (Can detect at Final endface)	1	6	Risk acceptability	-	-	3	2	1	6
169	Endface after polishing	Detect all case of endface fail	(3) FOV internal requirement	Couldn't detect product has endface fail	Insertion loss, return loss performance down	3	Using wrong PS, template	2	- Using auto PS - Template is available in line (Can detect at Final endface)	1	6	Risk acceptability	-	-	3	2	1	6
170	Endface after polishing	Detect all case of endface fail	(3) FOV internal requirement	Couldn't detect product has endface fail	Insertion loss, return loss performance down	3	Control before/after not good	2	- Operator was trained about requirement of process - Apply jig before/after (Can detect at Loss inspection & Final endface)	1	6	Risk acceptability	-	-	3	2	1	6
171	Endface after polishing	Detect all case of endface fail	(3) FOV internal requirement	Couldn't detect product has endface fail	Insertion loss, return loss performance down	3	Not good product flow out	1	- Attach yellow tape to identify NG product (Can detect at Loss inspection & Final endface)	1	3	Risk acceptability	-	-	3	1	1	3
172	Inter checking	Detect all case of inter fail	(1) Customer's requirement/agreement	Couldn't detect product has inter fail	Insertion loss, Return loss impacted	3	Machine performance not good	2	- Follow daily check sheet of machine - Check again with master sample (Can detect at Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
173	Inter checking	Detect all case of inter fail	(1) Customer's requirement/agreement	Couldn't detect product has inter fail	Insertion loss, RL impacted	3	Control before/after not good	2	- Operator was trained about requirement of process (Can detect at Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
174	Inter checking	Detect all case of inter fail	(1) Customer's requirement/agreement	Couldn't detect product has inter fail	Insertion loss, RL impacted	3	Not good product flow out	2	- Attach yellow tape to identify NG product - Scan barcode to control by system (ECS) (Can detect at Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
175	Inter checking	Endface was not damaged	(2) Common standard	Scratch or Chipping at ferrule surface	Insertion loss, return loss performance down	3	Ferrule endface impact to tool/jig	2	- Check final endface (Can detect at Loss inspection)	1	6	Risk acceptability	-	-	3	2	1	6
176	Housing	Right Structure of product	(2) Common standard	Wrong key direction of Housing	Can't Housing	2	Operation failure	2	Make clear key direction of Housing and MT in process spec	2	8	Risk acceptability	-	-	2	2	2	8

177	Housing	Right Structure of product	(2) Common standard	Forget spring both side of coupling	Loss performance reduction	2	Operation failure	2	Use magnet jig to check both side of coupling (200% inspection)	2	8	Risk acceptability	-	-	2	2	2	8
178	Housing	Right Structure of product	(2) Common standard	Forget pin clamp	Loss performance reduction	2	Operation failure	2	- Appearance inspection have checking items: MT ferrule is center of coupling or not to confirm there is pin clamp inside and right position.	2	8	Risk acceptability	-	-	2	2	2	8
179	Housing	Fiber isn't broken by Housing	(2) Common standard	Fiber is broken by Housing	Not meet customer requirement	4	MT ferrule is bend during Housing	2	- Apply guild MT to prevent MT ferrule bend during Housing - Loss measurement 100% can detect	1	8	Risk acceptability	-	-	4	2	1	8
180	Housing	Housing structure is complete	(2) Common standard	Housing structure isn't complete	Not meet customer requirement	3	Operator didn't use tool for Housing	2	- Make clear method Housing by tool in process spec - Apply scan serial of Housing tool one by one product	1	6	Risk acceptability	-	-	3	2	1	6
181	Housing	Housing structure is completed	(2) Common standard	Housing structure isn't completed	Not meet customer requirement	3	Re-Housing tool is not finished working moverment	1	- Make controller for Re-Housing tool. - Check actual 3pcs before using re-Housing tool. - Daily check re-Housing tool performance by checksheet	2	6	Risk acceptability	-	-	3	1	2	6
182	Housing	Housing structure is completed	(2) Common standard	Housing structure isn't completed	Not meet customer requirement	3	Ring N3 has wrong direction in base during assembly	2	- Attach Ring N3 into connector base before push MPO connector into adapter.	1	6	Risk acceptability	-	-	3	2	1	6
183	Housing	Housing structure is completed	(2) Common standard	Housing structure isn't completed	Not meet customer requirement	3	Ring N3 to be deformed after crimping	2	- Design point of contact of Connector base is Spring push: does not depend on the shape of Ring N3.	1	6	Risk acceptability	-	-	3	2	1	6
184	Housing	Fiber isn't bent after re-housing by tool	(3) FOV internal requirement	Fiber is bent after re-housing by tool	Fiber is broken outside MT	3	Jacket length is short	1	Change process prepare jacket from gathering to housing process, make sure length jacket can cover Spring push before crimping.	2	6	Risk acceptability	-	-	3	1	2	6
185	Housing	The coupling has enough 2 springs at both sides	(2) Common standard	The coupling lack of spring at 1 side	Not meet customer requirement	3	Sensors error can not detect springs into the coupling	1	- Daily check sensors operation, checked by actual samples	2	6	Risk acceptability	-	-	3	1	2	6
186	Housing	The coupling has to enough 2 springs at both sides	(3) FOV internal requirement	The coupling lack of 2 springs at both sides	Not meet customer requirement	3	Sensors error can not detect springs into the coupling	1	- Daily check sensors operation, checked by actual samples	2	6	Risk acceptability	-	-	3	1	2	6
187	Housing	Sensors have to check one by one the product	(3) FOV internal requirement	Sensors can not check one by one the product	Might flow out NG products to customer	3	Sensors can not check the same time when putting many products at the same time	1	- Modified add 1 PIN to check products sequentially - Daily check PINs operation	2	6	Risk acceptability	-	-	3	1	2	6
188	Housing	The machine has to check exactly the quantity of products	(3) FOV internal requirement	The machine checked incorrectly the quantity of products	Might flow out wrong quantity of products to customer	2	Sensors can not check the same time when putting many products at the same time	2	- Modified add 1 PIN to check products sequentially - Daily check PINs operation	2	8	Risk acceptability	-	-	2	2	2	8
189	Housing	The machine has to check exactly the quantity of products	(3) FOV internal requirement	The operator takes the container when having not yet enough the quantity	Might flow out wrong quantity of products to customer	2	The container can not prevent the Operator take it out when having not yet enough the quantity	2	- Modified add an electromagnetic lock into the container to prevent Operator take the container out when having not yet enough the quantity - Daily check an electromagnetic lock operation	2	8	Risk acceptability	-	-	2	2	2	8
190	Housing (MPO AFL)	Detect all case UV fiber damage	(3) FOV internal requirement	Could not detect UV fiber damage	Fiber broken	3	Wrong operation	1	Make clear requirement in PS	2	6	Risk acceptability	-	-	3	1	2	6

191	Housing	Correct type and quanity of material	(2) Common standard	Wrong type of material, lack of/ surplus material	Can not satisfy the customer requirement	3	Operator mistake, pick up wrong material	1	Make clear requirement in PS, using tool to detect	1	3	Risk acceptability	-	-	3	1	1	3
192	Housing	MT ferrule, Key housing same direction	(3) FOV internal requirement	MT ferrule, Key housing not same direction	Fiber swap	4	Operator mistake	1	Make clear requirement in PS	1	4	Risk acceptability	-	-	4	1	1	4
193	Housing	Complete assembly	(3) FOV internal requirement	Tool NG	Not strong in keep connector	4	Machine not good	1	Follow daily checksheet Check assembly complete by sound	1	4	Risk acceptability	-	-	4	1	1	4
194	Housing	MT ferrule must moving smoothly	(3) FOV internal requirement	Could not detect MT no	Can not satisfy the customer requirement	3	Wrong operation	1	Make clear requirement in PS	2	6	Risk acceptability	-	-	3	1	2	6
195	Housing	MT ferrule must moving smoothly	(3) FOV internal requirement	Could not detect MT no	Can not satisfy the customer requirement	3	Control before/ after not good	1	Use jig check before/after Make clear requirement in PS	2	6	Risk acceptability	-	-	3	1	2	6
196	Housing	Connector and cord was fix strongly	(3) FOV internal requirement	Sleeve was rotate after	Not strong in keep connector	3	The length of kevlar/cord not enough	2	Make clear requirement in PS	1	6	Risk acceptability	-	-	3	2	1	6
197	Housing	Connector and cord was fix strongly	(3) FOV internal requirement	Sleeve was rotate after	Not strong in keep connector	3	Crimping tool NG	1	Follow daily checksheet Check cord rotation after crimping	2	6	Risk acceptability	-	-	3	1	2	6
198	Housing	Connector and cord was fix strongly	(3) FOV internal requirement	Sleeve was rotate after	Not strong in keep connector	3	Arrangement of kevlar/cord not meet requirement	2	Make clear requirement in PS	1	6	Risk acceptability	-	-	3	2	1	6
199	Housing	Connector and cord was fix strongly	(3) FOV internal requirement	Sleeve was crack or bro	Not strong in keep connector	3	Use wrong crimping tool	2	Make clear requirement in PS Visual control by label	1	6	Risk acceptability	-	-	3	2	1	6
200	Housing	Connector and cord was fix strongly	(3) FOV internal requirement	Sleeve was crack or bro	Not strong in keep connector	3	Crimping tool NG	1	Follow daily checksheet Check cord rotation after crimping	2	6	Risk acceptability	-	-	3	1	2	6
201	Housing	Detect all case cord rotate	(3) FOV internal requirement	Could not detect cord ro	Not strong in keep connector	3	Wrong operation	1	Make clear requirement in PS	2	6	Risk acceptability	-	-	3	1	2	6
202	Housing	Detect all case cord rotate	(3) FOV internal requirement	Could not detect cord ro	Not strong in keep connector	3	Control before/ after not good	1	Use jig check before/after Make clear requirement in PS	2	6	Risk acceptability	-	-	3	1	2	6
203	Housing	Boot was close to MPO housing	(3) FOV internal requirement	Boot was not close to MPO housing	Appearance NG	2	Tool NG	1	Follow daily checksheet	2	4	Risk acceptability	-	-	2	1	2	4
204	Housing (MPO AFL)	Fix Heatskink tube and Expando tube	(3) FOV internal requirement	Heatshink tube and cord wasn't fix strongly	Not meet customer requirement	3	Operator mistake	1	Make clear requirement in PS	2	6	Risk acceptability	-	-	3	1	2	6
205	Housing (MPO AFL)	Fix Heatskink tube and Expando tube	(3) FOV internal requirement	Heatshink tube and cord wasn't fix strongly	Not meet customer requirement	3	Heating machine NG	1	Follow daily checksheet	2	6	Risk acceptability	-	-	3	1	2	6
206	Housing (MPO AFL)	Fix Heatskink tube and Expando tube	(3) FOV internal requirement	Cord / Expando tube deformed	Not meet customer requirement	3	Operator mistake	2	- Apply magic tape cover cord and expando tube - Make clear requirement in PS - Check appearance 200% (Housing, QC-App)	1	6	Risk acceptability	-	-	3	2	1	6

207	Housing (MPO AFL)	Correct position	(2) Common standard	Wrong position	Not meet customer requirement	2	Operator mistake	1	- Make clear requirement in PS - Check lenght 200% (Housing, Length check)	1	2	Risk acceptability	-	-	2	1	1	2
208	Housing (MPO AFL)	Corect direction	(2) Common standard	Wrong direction	Not meet customer requirement	4	Operator mistake	2	- Make clear requirement in PS - Check apperance 100%	1	8	Risk acceptability	-	-	4	2	1	8
209	Housing	Right Structure of product	(2) Common standard	Wrong direction label/numbering	Not meet customer requirement	2	Operator mistake	2	- Make clear requirement in PS - Check 100% at QC-app	2	8	Risk acceptability	-	-	2	2	2	8
210	Housing	Right Structure of product	(2) Common standard	Wrong Lable/numbering content	Not meet customer requirement	4	Operator mistake	2	- Make clear requirement in PS - Check label content: 100% at PRD	1	8	Risk acceptability	-	-	4	2	1	8
211	Housing	Right Structure of product	(2) Common standard	Label wrinkled	Not meet customer requirement	2	Impacts from many later processes	3	- Make clear requirement in PS - Check label appearance: 100% at PRD and 100% QC-app	1	6	Risk acceptability	-	-	2	3	1	6
212	Housing	Right Structure of product	(2) Common standard	Nhãn mất nét	Not meet customer requirement	2	Printing machine quality not stable	3	- Make clear requirement in PS - Check label content: 100% at PRD and 100% QC-app	1	6	Risk acceptability	-	-	2	3	1	6
213	Housing	Right Structure of product	(2) Common standard	Wrong attach position	Not meet customer requirement	3	Operator mistake	2	- Make clear requirement in PS - Template support attach label - Check length 100% and sampling at QC-app	1	6	Risk acceptability	-	-	3	2	1	6
214	Length checking	Detect all cases wrong length at the process	(1) Customer's requirement/agreement	Couldn't detect short length product	Customer can not use	4	Machine performance not good	1	- Follow daily check sheet of machine - Verify system daily by master sample	1	4	Risk acceptability	-	-	4	1	1	4
215	Length checking	Detect all cases wrong length at the process	(1) Customer's requirement/agreement	Couldn't detect short length product	Customer can not use	4	Setting wrong spec in program	1	- Cross check by other engineer	2	8	Risk acceptability	-	-	4	1	2	8
216	Length checking	Detect all cases wrong length at the process	(1) Customer's requirement/agreement	Couldn't detect short length product	Customer can not use	4	Wrong judgment	1	- Apply system can detect and judge automatically - Verify system daily by master sample	1	4	Risk acceptability	-	-	4	1	1	4
217	Length checking	Detect all cases wrong length at the process	(1) Customer's requirement/agreement	Couldn't detect short length product	Customer can not use	4	Control before/after not good	1	- Apply jig before/after - Can detect by system (ECS)	1	4	Risk acceptability	-	-	4	1	1	4
218	Length checking	Detect all cases wrong length at the process	(1) Customer's requirement/agreement	Couldn't detect long length product	Customer will not satisfy	3	Machine performance not good	1	- Follow daily check sheet of machine - Verify system daily by master sample	1	3	Risk acceptability	-	-	3	1	1	3
219	Length checking	Detect all cases wrong length at the process	(1) Customer's requirement/agreement	Couldn't detect long length product	Customer will not satisfy	3	Setting wrong spec in program	1	- Cross check by other engineer	2	6	Risk acceptability	-	-	3	1	2	6
220	Length checking	Detect all cases wrong length at the process	(1) Customer's requirement/agreement	Couldn't detect long length product	Customer will not satisfy	3	Wrong judgment	1	- Apply system can detect and judge automatically - Verify system daily by master sample	1	3	Risk acceptability	-	-	3	1	1	3

221	Length checking	Detect all cases wrong length at the process	(1) Customer's requirement/agreement	Couldn't detect long length product	Customer will not satisfy	3	Control before/after not good	1	- Apply jig before/after - Can detect by system (ECS)	2	6	Risk acceptability	-	-	3	1	2	6
222	Length checking	Stop wrong length product at the process	(1) Customer's requirement/agreement	Short length product flow out	Customer can not use	4	Operation failure	1	- Scan barcode to control by system (ECS) - NG product was separate with normal product	1	4	Risk acceptability	-	-	4	1	1	4
223	Length checking	Stop wrong length product at the process	(1) Customer's requirement/agreement	Long length product flow out	Customer can not use	4	Operation failure	1	- Scan barcode to control by system (ECS) - NG product was separate with normal product	1	4	Risk acceptability	-	-	4	1	1	4
224	Length checking	Endface was not damaged	(2) Common standard	Scratch or Chipping at ferrule surface	Insertion loss, return loss performance down	3	Impact from not good endface of measuring cord	1	- Periodically check end face of measuring cord (Can detect at Final endface)	2	6	Risk acceptability	-	-	3	1	2	6
225	Length checking	Endface was not damaged	(2) Common standard	Scratch or Chipping at ferrule surface	Insertion loss, return loss performance down	3	Strong connection force	1	- Operator was trained about requirement of process - Make clear the requirement in the PS	2	6	Risk acceptability	-	-	3	1	2	6
226	Identify checking	Detect all case fiber swap at the process	(1) Customer's requirement/agreement	Couldn't detect fiber swap	Customer can not use	4	Machine performance not good	1	- Follow dairly check sheet of machine - Verify system daily by NG sample and GOOD sample (Can detect at Loss inspection)	1	4	Risk acceptability	-	-	4	1	1	4
227	Identify checking	Detect all case fiber swap at the process	(1) Customer's requirement/agreement	Couldn't detect fiber swap	Customer can not use	4	Setting wrong port in Identify diagram	2	- Make clear the requirement in PS - Verify system daily by NG sample and GOOD sample (Can detect at Loss inspection)	1	8	Risk acceptability	-	-	4	2	1	8
228	Identify checking	Detect all case fiber swap at the process	(1) Customer's requirement/agreement	Couldn't detect fiber swap	Customer can not use	4	Using wrong ident master	2	- Make clear the requirement in PS - Mapping master ident of system to prevent use wrong master (Can detect at Loss inspection)	1	8	Risk acceptability	-	-	4	2	1	8
229	Identify checking	Detect all case fiber swap at the process	(1) Customer's requirement/agreement	Couldn't detect fiber swap	Customer can not use	4	Wrong judgment	1	- Apply system can detect and judge automatically - Verify system daily by NG sample and GOOD sample	1	4	Risk acceptability	-	-	4	1	1	4
230	Identify checking	Detect all case fiber swap at the process	(1) Customer's requirement/agreement	Couldn't detect fiber swap	Customer can not use	4	Scan record wrong serial label	1	- Check one by one product (Can detect at Loss inspection)	2	8	Risk acceptability	-	-	4	1	2	8
231	Identify checking	Detect all case fiber swap at the process	(1) Customer's requirement/agreement	Couldn't detect fiber swap	Customer can not use	4	Control before/after not good	1	- Operator was trained about requirement of process - Apply jig before/after (Can detect at Loss inspection)	2	8	Risk acceptability	-	-	4	1	2	8
232	Identify checking	Stop fiber swap product at the process	(1) Customer's requirement/agreement	Fiber swap product flow out	Customer can not use	4	Operation failure	1	- Scan barcode to control by system (ECS) - NG product was separate with normal product (Can detect at Loss inspection)	2	8	Risk acceptability	-	-	4	1	2	8
233	Identify checking	Endface was not damaged	(2) Common standard	Scratch or Chipping at ferrule surface	Insertion loss, return loss performance down	3	Impact from not good endface of reference cord	1	- Periodically check end face of reference cord (Can detect at Final endface)	2	6	Risk acceptability	-	-	3	1	2	6
234	Identify checking	Endface was not damaged	(2) Common standard	Scratch or Chipping at ferrule surface	Insertion loss, return loss performance down	3	Strong connection force	2	- Operator was trained about requirement of process - Make clear the requirement in the PS - Check correct reference cord for Ident	1	6	Risk acceptability	-	-	3	2	1	6

235	Loss inspection	Measure & record loss with correct qty	(1) Customer's requirement/agreement	Measure and record loss value with wrong qty	Customer will not satisfy	3	Wrong setting in Loss inspection program	1	- Cross check setting loss by other engineer (Can detect when check Test report)	2	6	Risk acceptability	-	-	3	1	2	6
236	Loss inspection	Measure & record loss with correct qty	(1) Customer's requirement/agreement	Measure and record loss value with wrong qty	Customer will not satisfy	3	Operator did not measure enough port	1	- Operator must be trained before operation - Apply system to detect and judge automatically - PS Loss and JBS is available (Can detect when check Test report)	1	3	Risk acceptability	-	-	3	1	1	3
237	Loss inspection	Measure & record loss with correct value	(1) Customer's requirement/agreement	Measure and record loss with wrong value	Customer will not satisfy	3	Loss machine has not stable	1	- Follow daily check sheet of machine - Verify/calibration equipment periodically	2	6	Risk acceptability	-	-	3	1	2	6
238	Loss inspection	Measure & record loss with correct value	(1) Customer's requirement/agreement	Measure and record loss with wrong value	Customer will not satisfy	3	Setting machine not good	1	- Check Insertion loss & Return loss again after set P0	2	6	Risk acceptability	-	-	3	1	2	6
239	Loss inspection	Measure & record loss with correct value	(1) Customer's requirement/agreement	Measure and record loss with wrong value	Customer will not satisfy	3	Adaptor using not good	1	- Make clear the requirement in the PS - Periodically pull test adaptor	2	6	Risk acceptability	-	-	3	1	2	6
240	Loss inspection	Measure & record loss with correct value	(1) Customer's requirement/agreement	Measure and record loss with wrong value	Customer will not satisfy	3	Master cord not good	2	- System will check good master cord before measuring	1	6	Risk acceptability	-	-	3	2	1	6
241	Loss inspection	Measure & record loss with correct value	(1) Customer's requirement/agreement	Measure and record loss with wrong value	Customer will not satisfy	3	Connect wrong diagram	2	- Check diagram for each product by PS - Operator must be trained before operation	1	6	Risk acceptability	-	-	3	2	1	6
242	Loss inspection	Measure & record loss with correct value	(1) Customer's requirement/agreement	Measure and record loss with wrong value	Customer will not satisfy	3	Operator determine wrong port	1	- Make clear the requirement in the PS - Operator must be trained before operation	2	6	Risk acceptability	-	-	3	1	2	6
243	Loss inspection	Measure & record loss with correct value	(1) Customer's requirement/agreement	Measure and record loss with wrong value	Customer will not satisfy	3	Operator determine wrong side of product	1	- Make clear the requirement in the PS - Operator must be trained before operation	2	6	Risk acceptability	-	-	3	1	2	6
244	Loss inspection	Measure & record loss with correct value	(1) Customer's requirement/agreement	Measure and record loss with wrong value	Customer will not satisfy	3	Connection not completely	1	- Make clear the requirement in the PS - Operator must be trained before operation	2	6	Risk acceptability	-	-	3	1	2	6
245	Loss inspection	Measure & record loss with correct value	(1) Customer's requirement/agreement	Measure and record loss with wrong value	Customer will not satisfy	3	Endface of master cord or product not good	1	- Clean endface before measure loss - Periodically check end face of master cord	2	6	Risk acceptability	-	-	3	1	2	6
246	Loss inspection	Stop all case loss fail at process	(1) Customer's requirement/agreement	Loss fail product flow out due to wrong judgment	Insertion Loss, Return Loss performance down	3	Wrong setting in Loss inspection program	1	- Cross check setting loss by other engineer (Can detect when check Test report)	1	3	Risk acceptability	-	-	3	1	1	3
247	Loss inspection	Stop all case loss fail at process	(1) Customer's requirement/agreement	Loss fail product flow out due to control WIP not good	Insertion Loss, Return Loss performance down	3	Operation failure	1	- Scan barcode to control by system (ECS) - NG product was separate with normal product	1	3	Risk acceptability	-	-	3	1	1	3
248	Loss inspection	Endface was not damaged	(2) Common standard	Scratch or Chipping at ferrule surface	Insertion loss, return loss performance down	3	Impact from not good endface of master cord	2	- Periodically check end face of master cord (Can detect at Final endface)	1	6	Risk acceptability	-	-	3	2	1	6

249	Loss inspection	Endface was not damaged	(2) Common standard	Scratch or Chipping at ferrule surface	Insertion loss, return loss performance down	3	Strong connection force	2	- Operator was trained about requirement of process - Make clear the requirement in the PS	1	6	Risk acceptability	-	-	3	2	1	6
250	Reflectometer Checking	Detect fiber broken inside	(1) Customer's requirement/agreement	Flow out fiber broken inside ferrule	Can not use	5	Misread the broken pulse Potential defect at fiber broken is <10pm	1	Scanning area is set 40mm to enlarged the area to easy detect the pulse	2	10	Risk acceptability	-	-	5	1	2	10
251	Reflectometer Checking	Detect fiber broken inside	(1) Customer's requirement/agreement	Flow out fiber broken inside ferrule	Can not use	5	Miss product pass through process	1	-Make clear the rule for "before and after" controlling	2	10	Risk acceptability	-	-	5	1	2	10
252	Reflectometer Checking	Not make endface damage	(2) Common standard	Endface damage	Product performance down	2	Not clean endface frequently	2	Set rule to clean endface one batch connection/clean time Endface check 100%	2	8	Risk acceptability	-	-	2	2	2	8
253	Cutting bare fiber	Fiber Length different of product is in spec	(1) Customer's requirement/agreement	Fiber and CT blade are not in good angle	Not meet customer requirement	4	Holder Base is heavy worn out	2	- Daily check check worn out point at Holder Base (left side, front side, right side)	2	16	Risk acceptability but need monitoring result of risk	-	-	4	2	2	16
254	Cutting bare fiber	Fiber Length different of product is in spec	(1) Customer's requirement/agreement	Fiber and CT blade are not in good angle	Not meet customer requirement	4	Cutting result of CT cleaver is not checked when blade is changed	2	- Check fiber length of 15 dummy sample cut by Cleaver after changing blade or blade position	2	16	Risk acceptability but need monitoring result of risk	-	-	4	2	2	16
255	Checking Fiber Gap by Auto Inspection system	Fiber Length different of product is in spec	(1) Customer's requirement/agreement	The system give wrong measurement result	Failure product is flowed out	4	The system is not correctly calibrated and checked	2	- Working Instruction: System calibration instruction - System working instruction. - Daily checksheet to checking Auto Gap Inspection system - Training record for Technician and Operator	2	16	Risk acceptability but need monitoring result of risk	-	-	4	2	2	16
256	Checking Fiber Gap by Auto Inspection system	Fiber Length different of product is in spec	(1) Customer's requirement/agreement	The system give wrong measurement result	Failure product is flowed out	4	System result is not confirmed by Master sample with verified Fiber Gap	2	Check result of system daily and after calibration by Master sample: - Good sample: FLD ≤ 15µm. - Not Good sample: FLD > 30µm	2	16	Risk acceptability but need monitoring result of risk	-	-	4	2	2	16
257	Checking Fiber Gap by Auto Inspection system	Fiber Length different of product is in spec	(1) Customer's requirement/agreement	Operator change unescessary axis/ parts while system operating	Failure product flowed out	4	Operator is not understand about system working and not follow instruction	2	- Instruct function of each axis clearly on WI System working - Training record for Technician and Operator	2	16	Risk acceptability but need monitoring result of risk	-	-	4	2	2	16
258	QCS Appearance	The final length is in Spec	(1) Customer's requirement/agreement	Can not detect wrong length of product.	Wrong length product may be flowed out	4	- The starting point of the ruller is determined wrongly	2	- All ruller on table start from zero point to prevent confusion. - Set up 1 OP marking on ruler and other OP cross check.	2	16	Risk acceptability but need monitoring result of risk	-	-	4	2	2	16
259	QCS Appearance	The final length is in Spec	(1) Customer's requirement/agreement	Can not detect wrong length of product.	Wrong length product may be flowed out	4	Rework product was not remeasure can not detect	2	- Rework product concerned length will be identify blue dot on product serial and declare con ECS system. This requirement was updated in rework instruction. - Line have available blue dot for rework. - After rework, PRD paste green dot to confirm length OK	2	16	Risk acceptability but need monitoring result of risk	-	-	4	2	2	16
260	**QCS Appearance**	**Appearance Good**	**(1) Customer's requirement/agreement**	**Can not detect appearance defect of connector/50cm length cord from connector ends.**	**NG App defect may be flow out**	**2**	**Work area cleanliness failure**	**2**	**- Cleaning work area each working shift - Appearance connector and 50cm length cord from connector ends**	**2**	**8**	**Risk acceptability**	**-**	**-**	**2**	**2**	**2**	**8**
261	**QCS Appearance**	**Appearance Good**	**(1) Customer's requirement/agreement**	**Hump around guide hole**	**NG App defect may be flow out**	**2**	**Incorrect operation**	**2**	**- Cover shape of tool, jig on table. Carry out 2S activity - Appearance connector.**	**2**	**8**	**Risk acceptability**	**-**	**-**	**2**	**2**	**2**	**8**
262	QCS Appearance	**Appearance Good**	(1) Customer's requirement/agreement	Can not detect App defect of product	NG App defect may be flow out	2	- OP judge wrong NG app defect - Careless handling	2	- Have PS with clear criteria for OP jugdement. If OP find any abnormal, leader/engineer will re-judge defect.	2	8	Risk acceptability	-	-	2	2	2	8

263	**QCS Appearance**	**Correct the laser content**	**(1) Customer's requirement/agreement**	**Lack of laser mark**	**Tracing data is not exact**	**2**	**Missing WIP already check and not yet check**	**2**	**- Control WIP clear before/After separately.**	**2**	**8**	**Risk acceptability**	**-**	**-**	**2**	**2**	**2**	**8**
13 **264**	**QCS Appearance**	**Have laser mark**	**(1) Customer's requirement/agreement**	**Lack of laser mark**	**Tracing data is not exact**	**2**	**Rework flow lacks of laser process**	**2**	**- Check laser mark of reworking products have or not.**	**2**	**8**	**Risk acceptability**	**-**	**-**	**2**	**2**	**2**	**8**
265	QC Final End face	Have not Endface defect out of spec	(1) Customer's requirement/agreement	Scratch or chipping on fiber endface	Optical performance down	3	Master cord at Loss had dirty and effect to products after loss	2	- Make rule to check end-face master cord after measure each products	2	12	Risk acceptability but need monitoring result of risk	-	-	3	2	2	12
266	QC Final End face	Have not Endface defect out of spec	(1) Customer's requirement/agreement	Scratch or chipping on fiber endface	Optical performance down	3	Master cord at length check of OTDR had dirty and effect to products	2	- Make rule to check end-face master cord after 12 times measure length	2	12	Risk acceptability but need monitoring result of risk	-	-	3	2	2	12
267	QC Final End face	Have not Endface defect out of spec	(1) Customer's requirement/agreement	Scratch or chipping on fiber endface	Optical performance down	3	Miss check core and mis check connector	2	- Have jig to prrevent mis check core. Jig require time check core at least 3 second. - Apply jig before-after to prevent mis check connector	2	12	Risk acceptability but need monitoring result of risk	-	-	3	2	2	12
268	QC Final End face	Have not Endface defect out of spec	(1) Customer's requirement/agreement	Scratch or chipping on MT surface	Optical performance down	3	Careless touching	2	- Apply Endface inspection and MT Appearance and then cover MT endface by cleaning cap	2	12	Risk acceptability but need monitoring result of risk	-	-	3	2	2	12
269	QC Final End face	Enough cap	(1) Customer's requirement/agreement	Lack of cap	Wrong structure	3	- Wrong method during operation in previous process	2	- Have document to guidline OP check quantity of cap - Control by jig	2	12	Risk acceptability but need monitoring result of risk	-	-	3	2	2	12
270	Q. Packing/Label	Correct label	(1) Customer's requirement/agreement	Can not detect letter of label was lost or unclear	Difficult to identify product	1	Miss check label	2	- Check information on label and appearance before attaching - Control label befor and after check	2	4	Risk acceptability	-	-	1	2	2	4
271	Q. Packing/Label	Correct label	(1) Customer's requirement/agreement	Can not detect wrong content of label	Identify product wrong	2	Miss check label	2	- Check information on label and appearance before attaching - Control label befor and after check	2	8	Risk acceptability	-	-	2	2	2	8
272	Q. Packing/Label	Correct label	(1) Customer's requirement/agreement	Stick label wrong	Can not Identify product	2	- Operation mistake	2	- Apply by label program - Label program check product serial & label match when scanning	2	8	Risk acceptability	-	-	2	2	2	8
273	Q. Packing/Label	Correct label	(1) Customer's requirement/agreement	Lack of label on bag	Not meet customer requirement	2	- Operation mistake	2	- Must be sticked label on PE bag before scaning label. - Apply scaning label program to make sure enough bad label	1	4	Risk acceptability	-	-	2	2	1	4
274	Q. Packing/Label	Correct label position	(1) Customer's requirement/agreement	Stick wrong label position	Not meet customer requirement	2	- Operation mistake	2	- Operator stick label based on PS to prevent sticking wrong position. - End side label will be checked at final packing step to make sure correct label.	3	12	Risk acceptability but need monitoring result of risk	-	-	2	2	3	12
275	Q. Packing/Label	Product serial are revoked after scanning	(1) Customer's requirement/agreement	Surplus product serial on product	Dissatisfied customers	1	- Operator have not understood yet about revoking product serial after scanning. - Operator forgot removing Product serial after scanning.	2	- Training operator understand about this process - Using revoking tool to control the number of revoking label	2	4	Risk acceptability	-	-	1	2	2	4
276	Q. Packing/Label	Correct packing type at connectoer side	(1) Customer's requirement/agreement	Wrong packing type at connector type	Not meet customer requirement	4	- Operation mistake	1	- OP packing product based on PS to prevent wrong packing method.	3	12	Risk acceptability but need monitoring result of risk	-	-	4	1	3	12

277	Q. Packing/Label	Enough tape	(1) Customer's requirement/agreement	Lack of tape	Not fix the product	2	- Operation mistake	1	- OP packing product based on PS to prevent wrong packing method.	3	6	Risk acceptability	-	-	2	1	3	6
278	Q. Packing/Label	Enough tie lap	(1) Customer's requirement/agreement	Lack of tie lap	Not fix the product	2	- Operation mistake	1	- Controll quantity of tie lap by jig	2	4	Risk acceptability	-	-	2	1	2	4
279	Q. Packing/Label	Correct heat shrinkabel tube length	(1) Customer's requirement/agreement	Heat shrinkabel tube is shorter than requirment	Can not keep EXPANDABLE BRAIDED SLEEVE WIRE D	4	- Operation mistake	2	- Marking on rule for cutting base on PS - Cross checking	2	16	Risk acceptability but need monitoring result of risk	-	-	4	2	2	16
280	Q. Packing/Label	Correct heat shrinkabel tube length	(1) Customer's requirement/agreement	Heat shrinkabel tube is longer than requirment	Difficult to tear when customer open packing of product	3	- Operation mistake	2	- Marking on rule for cutting base on PS - Cross checking	2	12	Risk acceptability but need monitoring result of risk	-	-	3	2	2	12
281	Q. Packing/Label	Correct rip cord length	(1) Customer's requirement/agreement	Rip cor is shorter than requirment	Difficult to tear when customer open packing of product	3	- Operation mistake	2	- Marking on rule for cutting base on PS - Cross checking	2	12	Risk acceptability but need monitoring result of risk	-	-	3	2	2	12
282	Q. Packing/Label	Heat heat shrinkable tube is not loosen	(1) Customer's requirement/agreement	Heat heat shrinkabel tube is loosen	Can not keep EXPANDABLE BRAIDED SLEEVE WIRE D	3	- Operation mistake	2	- After heatting OP will check the heat shrinkabel tube is loosen - Set up cross check by other OP	1	6	Risk acceptability	-	-	3	2	1	6
283	Q. Packing/Label	Tie lap is not loosen	(1) Customer's requirement/agreement	Tie lap is loosen	Not fix the product on bobbin	3	- Operation mistake	2	- After tie OP will check the tie lap is loosen	2	12	Risk acceptability but need monitoring result of risk	-	-	3	2	2	12
284	Q. Packing/Label	Right quantity	(1) Customer's requirement/agreement	Wrong quantity	Wrong quantity to customer	4	- OP mistake	2	- Scan label to control quantity	1	8	Risk acceptability	-	-	4	2	1	8
285	Q. Packing/Label	Right quantity	(1) Customer's requirement/agreement	Wrong quantity	Wrong quantity to customer	4	- The scale incorrect (for KIT product)	2	- The scale is calibrated. - Have instruction document for setting the scale before weighing.	2	16	Risk acceptability but need monitoring result of risk	-	-	4	2	2	16
286	Q. Packing/Label	Right quantity	(1) Customer's requirement/agreement	Wrong quantity	Wrong quantity to customer	4	- Wrong material weight because difference weight of each material.	2	- Have document for determination of the minimum quantity of each part per weight time.	2	16	Risk acceptability but need monitoring result of risk	-	-	4	2	2	16
287	Q. Packing/Label	Right packing material	(1) Customer's requirement/agreement	Wrong packing material for pulling eyes packing	Dissatisfied customers	3	Incorrect operation	1	- Apply BOM program to control packing material which is deliver follow product code - Make clear material requirement in PS. - Cross check the material at Final packing station	2	6	Risk acceptability			3	1	2	6
288	Q. Packing/Label	Right packing material	(1) Customer's requirement/agreement	Wrong packing material	Product may get damage	2	Incorrect operation	2	- Apply BOM program to control packing material which is deliver follow product code - OP follow PS was made by QAS	2	8	Risk acceptability	-	-	2	2	2	8
289	Shipping	Right quantity and ship good products	(1) Customer's requirement/agreement	Lost product	Wrong destination	3	Incorrect operation	2	- Select good forwarder - Follow shipping product after ship	2	12	Risk acceptability but need monitoring result of risk	-	-	3	2	2	12
290	Shipping	Right quantity and ship good products	(1) Customer's requirement/agreement	Not good product may flow out	Test report Late verification	2	Timeline was not kept	2	- Confirm test report before shipping by using program	2	8	Risk acceptability	-	-	2	2	2	8

291	Shipping	Right quantity and ship good products	(1) Customer's requirement/agreement	Not good product may flow out	Wrong data judgement	2	Operation failure	2	- Use program to judge data	2	8	Risk acceptability	-	-	2	2	2	8
292	Product security	Not expose vulnerability	(3) FOV internal requirement	Expose vulnerability	No secure for customer of FTTH system	4	- Completed product was attached malware, virus, spyware (impossible - product is passived kind)	1	Don't need take additional action	1	4	Risk acceptability	-	-	4	1	1	4
293	Product security	Not expose vulnerability	(3) FOV internal requirement	Expose vulnerability	No secure for customer of FTTH system	4	- Product was exploited from the firmware or hardware (impossible - product is passived kind)	1	Don't need take additional action	1	4	Risk acceptability	-	-	4	1	1	4
294	Product security	Not expose vulnerability	(3) FOV internal requirement	Expose vulnerability	No secure for customer of FTTH system	4	- Process operation meets error of programming (impossible - product is passived kind)	1	Don't need take additional action	1	4	Risk acceptability	-	-	4	1	1	4
295	Product security	Not expose vulnerability	(3) FOV internal requirement	Expose vulnerability	No secure for customer of FTTH system	4	- Surplus or alternative parts from product can be utilized for unexpected purposes (impossible - product is passived kind, don't have surplus port)	1	Don't need take additional action	1	4	Risk acceptability	-	-	4	1	1	4

Some comments:

Severity: An assessment of the seriousness of the effect (as listed in the previous column) of the potential failure mode to the next components, subsystem, system, or customer if it occurs. Severity applies to the effect only.

Occurrence: This is the likelihood that a specific cause/mechanism (as listed in the previous column) will occur. Like severity, occurrence uses a ranking number.

Detect: Assessment of the ability of the current design controls to detect a potential design weakness.

Requirement classification: Will sellect 1 of 3 options: (1)Customer's requirement/agreement, (2)Common standard, (3)FOV internal requirement

III. DISTRIBUTION TO CONCERNED SECTIONS

☐ PRD ☐ PRE1 ☐ PRE2 ☐ PRE3 ☐ QAE ☐ TRC ☐ LOG ☐ PLN ☐ PTE ☐ SES ☐ DES ☐ MDP ☐ Customer: ..... ☐ Others: .....

POTENTIAL FAILURE MODE AND EFFECTS ANALYSIS

FMEA'S REVISION HISTORY

Preparing Date	PIC	Ver	Old content	New content		
				Description	Reason of change	Change requester
19.Dec.2016	Toan LDS	1	-	-	New issue	Tien DT
23.May.2020	Chau DNB	2	-	Update risk review for apply auto cutting machine	Apply auto machine to cutting cord & hytrel tube	Tien DT
14.Jul.2020	Chau DNB	3	-	None	1/ Update risk follow process review 2/ Update risk review for SWR fiber	Tien DT
11.Sep.2020	Chau DNB	4	-	None	1/ Update risk review for apply re-housing assembly tool	Tien DT
24.Sep.2020	Tan NV	5	-	None	Update risk review at Loss Inspection for the soft connection tool	Tien DT
25.Jan.2021	Tan NV	6	-	None	Update risk review at Housing process for Checking springs by auto-machine	Tien DT
26.Apr.2021	Phuongtm	7	-	None	Update risk review at Q. Packing/Label for checking quantity	Ductnm
25.Jan.2022	Phuongtm	8	-	None	Remove risks are not suitable and update risks review at Appearance and Q. Packing/Label	Ductnm
18. Mar.2022	CatNNM	9	-	None	Update risk review at process Cutting Bare fiber and Checking fiber length different by Auto System for MPO Stub product.	DepNV
25. Jul .2023	ThanhNC	10	- Form ver 10	None FMEA form ver 12	Update risk review at Mark strip, Branching, Epotek mixing, Housing process for all product at MPO line. Updated document	PhuocNB
26-Dec-23	HieuTT	11	Item 210:Current Design or ProcessControls (Prevention/Detection) - Make clear requirement in PS - Check label content: 100% at PRD and QC	FMEA form ver 12	Cancel scanning branching label in QC station follow 4M: 4-Pr-007-4-Fo-0007-9-RC-0079	DucTNM
	Tiên		Item 211:Current Design or ProcessControls (Prevention/Detection) Make clear requirement in PS - Check label content: 100% at PRD and 100% QC-app	Item 211:Current Design or ProcessControls (Prevention/Detection) Make clear requirement in PS - Check label appearance: 100% at PRD and 100% QC-app	Cancel scanning branching label in QC station follow 4M: 4-Pr-007-4-Fo-0007-9-RC-0079	PhuocNB
19-Mar-24	HieuTT	12	-	1) Adding item 286 2) Item 273 Current Design or ProcessControls: add checking end side label at final packing process	Apply 4M cancel Appearace for pulling packing: 4-Pr-007-4-Fo-0007-9-RC-0083	DucTNM
30-Jul-24	Bichtramn	13	1) Item 260: - Have not App defect out of spec - Contamination cord, connector housing - Appearance cord and connector. 2) Item 261: - Have not App defect out of spec - Appearance cord and connector. 3) Item 262: Have not App defect out of spec 4) Item 263: - Wrong the laser content flow out - Check laser content 100% at QC process 5) Do not mention	1) Item 260: - Appearance Good - Can not detect appearance defect of connector/50cm length cord from connector ends. - Appearance connector and 50cm length cord from connector ends 2) Item 261: - Appearance Good - Appearance connector. 3) Item 262: Appearance Good 4) Item 263: - Lack of laser mark ~~- Check laser content 100% at QC process~~ 5) Add item 264.	1), 2), 3) Make clear and reduce checking cord/cable appearance at QC App for normal MPO products as CO 9-PR-0014-9-FO-0001-9-RC-0049 4) Reduce checking item of QC App for normal MPO products as CO 9-PR-0014-9-FO-0001-9-RC-0004 5) Add control item.	DucTNM