

FUJIKURA FIBER OPTICS VIET NAM																
Form: 0-PR-012-0-Fo-001		POTENTIAL FAILURE MODE AND EFFECTS ANALYSIS								Page: 2/4	Ver: 13					
Kind of FMEA: Design FMEA		Process FMEA														
Product (or project) Name: P- FMEA for Cleaner product Product (or project) spec: HW*				Members' signature: (include 2 cross-function sections at least) <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> Thu DTM - PRE1 20014 </div> <div style="text-align: center;"> Phuong TM-QAE 21609 </div> </div>		Prepared by: 20014 Thu DTM		Approved by: (Dept. Div. manager's approval for high risk case, other cases can be approved by section managers) 10253		Customer's approval (If required): Comment: Signature and date:			FMEA Number: 0-PR-012-0-FO-001-4-RC-0111 Version: 06 FMEA Original Date: 9- Aug - 2019 FMEA Revision Date: 29-Aug-2024			
I. CONCLUSION: - Risk is monitor , needless to take action for current control - With Current control method, we can guarantee quality of product and can move to mass production state,																
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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/Process/Controls (Prevention/Detection)	Detect	R P N	Final Decision	Responsibility & Target Completion Date	Actions Taken	Severity Occurrence Detect	R P N 5
1	Washing & Drying	Enough washing time 5min +/- 30s	(1) Customer's requirement/agreement	Washing material isn't enough time 5min +/-30s	Material is not clean => Endface dirty, appearance NG	4	No maintenance => Wrong set up washing machine.	2	- Apply daily checksheet to verify machine at beginning of a shift, check timer enough 5min +/-30s	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-
2	Washing & Drying	Enough washing time 5min +/- 30s	(1) Customer's requirement/agreement	Washing material isn't enough time 5min +/-30s	Material is not clean => Endface dirty, appearance NG	4	OP adjust setting time by themselves and don't ask leader.	2	- Training and make rule : " OP don't permit adjust setting time of machine". - Cover adjustment button. - Apply daily checksheet	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-
3	Washing & Drying	Correct kind of washing liquid	(1) Customer's requirement/agreement	Apply alcohol for material is required washing by water	Material is deform, change characteristic => appearance NG	2	OP make wrong	2	- Have PS to instruct OP make correct which material will wash which liquid. - Check appearance 3pcs/tray by microscope. - Check appearance of part at each using process.(100%).	2	8	Risk acceptance	-	-	-	-
4	Washing & Drying	Correct kind of washing liquid	(1) Customer's requirement/agreement	Apply water for material is required washing by alcohol	Material is not clean, dry => Endface dirty.	4	OP make wrong	2	- Have PS to instruct OP make correct which material will wash which liquid. - Check appearance 3pcs/tray by microscope. - Check appearance of part at each using process.(100%). - Check endface 100%	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-
5	Washing & Drying	Keep leadtime to change new washing liquid. (1500sets/time+/-100sets for Sharp machine, 4,500sets/time +/-200sets for Suzuki machine)	(2) Common standard	Over leadtime to change new washing liquid.	Material is not clean => Endface dirty, appearance NG	4	OP make wrong	2	- Control replacement times by record form, OP must to plus total quantity material washed not over (1500sets/time+/-100sets for Sharp machine, 4,500sets/time +/-200sets for Suzuki machine) and cross checked by leader up. - Check appearance 3pcs/tray by microscope. - Check appearance of part at each using process.(100%). - Check endface 100%	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-
6	Washing & Drying	Enough time of drying machine.	(2) Common standard	Not enough drying time	Material don't dry => Endface dirty	4	No maintenance =>Wrong set up washing machine.	1	- Apply daily checksheet to verify machine at beginning of a shift, check timer of machine is correct. - Check appearance 3pcs/tray by microscope. - Check appearance of part at each using process.(100%). - Check endface 100%	2	8	Risk acceptance	-	-	-	-
7	Washing & Drying	Enough time of drying machine.	(2) Common standard	Over drying time	Material is deform, change characteristic => appearance NG	2	No maintenance =>Wrong set up washing machine.	1	- Apply daily checksheet to verify machine at beginning of a shift, check timer of machine is correct. - Check appearance 3pcs/tray by microscope. - Check appearance of part at each using process.(100%). - Check endface 100%	2	4	Risk acceptance	-	-	-	-
8	Washing & Drying	Correct lot after washing & drying	(3) FOV internal requirement	Wrong lot	Wrong tracability	3	OP make wrong	2	- Have PS to instruct OP make correct order washing. - Wash complete each lot, before change next lot. - Have detail label for trays material which were separated from big lot.	2	12	Risk acceptance but need monitoring the result of risk	-	-	-	-
9	Washing & Drying	Correct lot after washing & drying	(3) FOV internal requirement	Wrong lot	Wrong product structure of product	4	OP make wrong	2	- Have PS to instruct OP make correct order washing. - Wash complete each lot, before change next lot. - Have detail label for trays material which were separated from big lot.	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-
10	Washing & Drying	Holder clean(No dirty, No contamination)	(2) Common standard	Holder not clean(dirty, contamination) by washing machine NG	Material is not clean => Endface dirty, appearance NG	3	OP make wrong	2	-PS require check 3 pcs samples by SZ61 (Microscope) after cleaning. - PS require check 100% appearance of Holder before assembly by visual.	2	12	Risk acceptance but need monitoring the result of risk	-	-	-	-
11	Washing & Drying	Holder clean(No dirty, No contamination)	(2) Common standard	Holder not clean(dirty, contamination) by quality of Alcohol NG or by processing of supplier.	Material is not clean => Endface dirty, appearance NG	3	OP make wrong	2	-PS require check 3 pcs samples by SZ61 (Microscope) after cleaning. - PS require check 100% appearance of Holder before assembly by visual.	2	12	Risk acceptance but need monitoring the result of risk	-	-	-	-
12	Washing & Drying	Polish MPX head to become flat	(3) FOV internal requirement	Head is not flat	Endface not clean	4	OP make wrong and don't check after polishing	2	- Have PS to instruct OP judge surface of MPX/MPX head is good or NG. - QCS check endface 100%	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-

13	Laser marking	Print correct content	(1) Customer's requirement/agreement	Wrong content	Can not trace 4M data	3	OP not check laser number with product serial	1	- Training and make rule "OP must to check laser number and check sheet after print it 100%". - QCS check appearance 100%. - Arrange S/N to increase order to easy check.	2	6	Risk acceptance	-	-	-	-	-	-
14	Laser marking	Print correct content	(1) Customer's requirement/agreement	Wrong content	Can not trace 4M data	3	OP input wrong beginning number on printing program	3	- Laser program will be control information of product (PO,JD,Qty). - QCS check 100%. - Training and make rule "OP must to check laser number and S/N after print it".	1	9	Risk acceptance	-	-	-	-	-	-
15	Laser marking	Print correct content	(1) Customer's requirement/agreement	Wrong content	Can not trace 4M data	3	Letter/content is not clear	3	- Apply jig to fix position of parts. - Leader check the 4 first sample. - QCS check 100%.	1	9	Risk acceptance	-	-	-	-	-	-
16	Laser marking	Print correct content	(1) Customer's requirement/agreement	Wrong content	Can not trace 4M data	3	Wrong printing order	3	- Laser program will be control information of product (PO,JD,Qty). - Get S/N program will be control S/N follow MP. - QCS check 100%. - Training and make rule "OP must to check laser number and S/N after print it". - Clerk make printing order then engineer cross check	1	9	Risk acceptance	-	-	-	-	-	-
17	Laser marking	Correct position	(1) Customer's requirement/agreement	Print wrong position	Not follow customer requirement	2	OP print wrong position	2	- Apply jig to fix position of parts. - Leader check the 4 first sample. - QCS check 100%.	1	4	Risk acceptance	-	-	-	-	-	-
18	Laser marking	Correct position	(1) Customer's requirement/agreement	Print wrong position	Not follow customer requirement	2	Use wrong kind of jig	2	- Leader check the 4 first sample. - QCS check 100%.	2	8	Risk acceptance	-	-	-	-	-	-
19	Laser marking	Correct position	(1) Customer's requirement/agreement	Print wrong position	Not follow customer requirement	2	Program print wrong	2	- Leader check the 4 first sample. - QCS check 100%. - Apply daily checksheet of machine.	2	8	Risk acceptance	-	-	-	-	-	-
20	Laser marking	Correct position	(1) Customer's requirement/agreement	Print wrong position	Not follow customer requirement	2	Printing order is wrong	2	- Apply program make printing order.	2	8	Risk acceptance	-	-	-	-	-	-
21	Laser marking	Correct position	(1) Customer's requirement/agreement	Print wrong position	Not follow customer requirement	2	The Jig was worn	2	- Apply daily checksheet of machine. - Leader check the first sample.	2	8	Risk acceptance	-	-	-	-	-	-
22	Laser marking	Correct FOV lot	(3) FOV internal requirement	Wrong lot	Can not trace lot of material	3	Line control lot NG, not FIFO	2	- Instruct OP print FIFO. - Print complete a lot before change next lot. - ECS program control quantity of lot. - Control quantity of material by quantity of check sheet.	1	6	Risk acceptance	-	-	-	-	-	-
23	Preparation	Sticker: correct position, correct direction	(1) Customer's requirement/agreement	Stick wrong position and direction	Not follow customer requirement	3	OP make wrong	1	- Have PS to instruct OP attach sticker correct position and direction on product - QCS check appearance 100%.	2	6	Risk acceptance	-	-	-	-	-	-
24	Preparation	Correct content of sticker	(1) Customer's requirement/agreement	Incorrect content	Not follow customer requirement	3	Supplier make wrong	1	- ICM check appearance sampling with master sample. - QCS ICM and PRD check first sample in lot.	2	6	Risk acceptance	-	-	-	-	-	-
25	Preparation	Correct kind of cap.	(1) Customer's requirement/agreement	Wrong cap	Wrong structure as customer requirement	4	OP make wrong	1	- Have PS to instruct OP use correct kind of cap for each product. - Make rule: "OP don't permit use material drop out on the floor and must inform leader for instruction". - Easy find abnormal if use wrong kind of cap when check endface at QCS.	2	8	Risk acceptance	-	-	-	-	-	-
26	Preparation	Spring - correct kind	(1) Customer's requirement/agreement	Wrong kind	Function NG	4	Op assemble wrong spring with other kind of product.	2	- Have PS to instruct OP use correct kind of spring for each product. - Make rule: "OP don't permit use material drop out on the floor and must inform leader for instruction". - Check function 200% at PRD app & QCS App	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-	-	-
27	Preparation	Spring - Assemble wrong quantity	(1) Customer's requirement/agreement	Wrong quantity	Function NG	4	OP not control quantity of spring	2	- Have PS to instruct OP prepare correct quantity spring for each product. - Have jig control quantity. - OP check enough quantity of spring on the jig before assembly on product.	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-	-	-
28	Preparation	Insert Spring to Tiphead	(1) Customer's requirement/agreement	Not assemble	Function NG	4	OP make wrong, not assemble spring into tiphead	2	- Have PS to instruct OP insert correct kind of spring into correct kind of tiphead. - OP check Tip have spring or not before start assemble. - Check function 200% at PRD App & QCS App	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-	-	-
29	Preparation	Insert shaft MA into holder L	(1) Customer's requirement/agreement	Not assemble	Function NG	4	OP make wrong	2	- Have PS to instruct OP Insert shaft MA into holder L. - OP check Holder L have Shaft MA or not before start assemble. - Check function 200% at PRD App & QCS App	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-	-	-
30	Preparation of tip with spring on (Apply Separator machine)	Spring: No deformation	(1) Customer's requirement/agreement	Deformed (bend, stretch, deep scratch...)	Can not click- Function NG	4	The big forces acting on spring caused by machine	2	- Have PS to check appearance of spring before assembly - Check function 200% at PRD App & QCS App	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-	-	-
31	Preparation of tip with spring on (Apply Separator machine)	Spring: no twist	(1) Customer's requirement/agreement	Spring: twist	Spring stuck on slot. Machine don't work smoothly	4	Structure of spring is easy to twist	1	- Use magnet to pick up the twist spring easy (3s) - Have tested: machine separate about >70 spring/1 stuck time	2	8	Risk acceptance	-	-	-	-	-	-

32	Preparation of tip with spring on (Apply Separator machine)	Spring clean	(1) Customer's requirement/agreement	Spring have the contamination (dirty, oil...)	Endface NG- Function NG	4	Spread contamination easily from bunker	2	- Check function at endface inspection - Machine put inside cleanroom controlled dirty very well	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-	-
33	Rewinding	Correct length of string	(1) Customer's requirement/agreement	Shortage length	Not enough click times	3	Rewinding machine is error	2	- Apply daily check sheet for machine. - Check 1 sample when beginning of shift, change length, stop machine due to error.	2	12	Risk acceptance but need monitoring the result of risk	-	-	-	-	-
34	Rewinding	Correct length of string	(1) Customer's requirement/agreement	Shortage length	Not enough click times	3	OP cut wrong position when machine run completely.	2	- Define cutting position on machine.	2	12	Risk acceptance but need monitoring the result of risk	-	-	-	-	-
35	Rewinding	Correct length of string	(1) Customer's requirement/agreement	Shortage length	Not enough click times	3	Not fix string on bobbin before machine run	2	- Have PS to instruct OP make correct.	2	12	Risk acceptance but need monitoring the result of risk	-	-	-	-	-
36	Rewinding	Correct length of string	(1) Customer's requirement/agreement	Shortage length	Not enough click times	3	OP choose wrong program for string length	2	- Make clear instruction into process specification and training for OP - Have sampling length checking when beginning of shift, change length, stop machine due to error.	2	12	Risk acceptance but need monitoring the result of risk	-	-	-	-	-
37	Rewinding	Correct length of string	(1) Customer's requirement/agreement	Shortage length	Not enough click times	3	OP fixed the screw to keep bobbin not enough force, make bobbin do not run, lack of string length	2	- Make clear instruction into training document and training for OP - Have sampling length checking when beginning of shift, change length, stop machine due to error. - Machine have alarm if the machine running in abnormal situation	2	12	Risk acceptance but need monitoring the result of risk	-	-	-	-	-
38	Rewinding	Correct length of string	(1) Customer's requirement/agreement	Surplus length	Waste material	1	Rewinding machine is error	2	- Apply daily check sheet for machine. - Check 1 sample when beginning of shift, change length, stop machine due to error.	2	4	Risk acceptance	-	-	-	-	-
39	Rewinding	Correct length of string	(1) Customer's requirement/agreement	Surplus length	Waste material	1	OP rewinding manual many rounds to fix string on bobbin.	2	- Have PS to instruct OP make correct.	2	4	Risk acceptance	-	-	-	-	-
40	Rewinding	Correct length of string	(1) Customer's requirement/agreement	Surplus length	Waste material	1	OP cut wrong position when machine run completely.	2	- Define cutting position on machine.	2	4	Risk acceptance	-	-	-	-	-
41	Rewinding	Correct kind of string	(1) Customer's requirement/agreement	Wrong kind of string	Wrong structure as customer requirement	4	OP make wrong	1	- Have PS to instruct OP make correct. - QCS App and PRD App check function 200%.	2	8	Risk acceptance	-	-	-	-	-
42	Rewinding	String has good appearance	(1) Customer's requirement/agreement	String dirty	Endface dirty	4	Supplier make dirty	2	- Test pilot run 1 pc/lot. - QCS check endface 100%.	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-	-
43	Rewinding	String has good appearance	(1) Customer's requirement/agreement	String dirty	Endface dirty	4	OP not wear glove when operation	2	- Make rule "OP must to wear glove when operation or touch cleaning parts". - QCS check endface 100%.	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-	-
44	Rewinding	String has good appearance	(1) Customer's requirement/agreement	String dirty	Endface dirty	4	Warehouse make dirty	2	- Make rule "OP must to wear glove when operation or touch cleaning parts". - QCS check endface 100%.	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-	-
45	Rewinding	String has good appearance	(1) Customer's requirement/agreement	String is not damaged	String tangled	4	Can not assembly to product	1	- Have function test at assembly process to check jamming click.	2	8	Risk acceptance	-	-	-	-	-
46	Rewinding	String has good appearance	(1) Customer's requirement/agreement	String is not damaged	String is stretch	3	Reduce performance of cleaning function of product	2	- Have function test for cleaning function at QC inspection process	2	12	Risk acceptance but need monitoring the result of risk	-	-	-	-	-
47	Assembly 1	Correct kind of material	(1) Customer's requirement/agreement	Wrong kind of material	Function NG	4	OP make wrong	2	- Have PS to instruct OP make correct. - PRD check appearance inside 100%. - QCS App and PRD App check function 200%.	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-	-
48	Assembly 1	Correct direction	(1) Customer's requirement/agreement	Wrong direction	Function NG	4	OP make wrong	2	- Have PS to instruct OP make correct. - PRD check appearance inside 100%. - QCS App and PRD App check function 200%.	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-	-
49	Assembly 1	Correct position	(1) Customer's requirement/agreement	Wrong position	Function NG	4	OP make wrong	2	- Have PS to instruct OP make correct. - PRD check appearance inside 100%. - QCS App and PRD App check function 200%.	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-	-
50	Assembly 1	Correct quantity	(1) Customer's requirement/agreement	Wrong quantity	Function NG	4	OP make wrong	2	- Have PS to instruct OP make correct. - PRD check appearance inside 100%. - QCS App and PRD App check function 200% - Control quality of part by jig.	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-	-
51	Appearance 1	Appearance OK : No deformation, crack, burr	(1) Customer's requirement/agreement	Deformation, crack, burr	Customer not satisfy	2	OP not check or not detect	2	- Have PS to instruct OP make correct.	3	12	Risk acceptance but need monitoring the result of risk	-	-	-	-	-
52	Appearance 1	Appearance OK : No deformation, crack, burr	(1) Customer's requirement/agreement	Deformation, crack, burr	Customer not satisfy	2	OP judge wrong	2	- Have PS to instruct OP make correct.	3	12	Risk acceptance but need monitoring the result of risk	-	-	-	-	-
53	Appearance 1	Correct kind of material	(1) Customer's requirement/agreement	Wrong kind of material	Function NG	4	OP not check or not detect	2	- Have PS to instruct OP make correct.	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-	-

54	Appearance 1	Correct kind of material	(1) Customer's requirement/agreement	Wrong kind of material	Function NG	4	OP judge wrong	2	- Have PS to instruct OP make correct.	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-	-	-
55	Appearance 1	Correct direction	(1) Customer's requirement/agreement	Wrong direction	Function NG	4	OP not check or not detect	2	- Have PS to instruct OP make correct.	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-	-	-
56	Appearance 1	Correct direction	(1) Customer's requirement/agreement	Wrong direction	Function NG	4	OP judge wrong	2	- Have PS to instruct OP make correct.	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-	-	-
57	Appearance 1	Correct position	(1) Customer's requirement/agreement	Wrong position	Function NG	4	OP not check or not detect	2	- Have PS to instruct OP make correct.	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-	-	-
58	Appearance 1	Correct position	(1) Customer's requirement/agreement	Wrong position	Function NG	4	OP judge wrong	2	- Have PS to instruct OP make correct.	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-	-	-
59	Appearance 1	Correct quantity	(1) Customer's requirement/agreement	Wrong quantity	Function NG	4	OP not check or not detect	2	- Have PS to instruct OP make correct.	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-	-	-
60	Appearance 1	Correct quantity	(1) Customer's requirement/agreement	Wrong quantity	Function NG	4	OP judge wrong	2	- Have PS to instruct OP make correct.	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-	-	-
61	Assembly 2	Correct kind of material	(1) Customer's requirement/agreement	Wrong kind of material	Function NG	4	OP make wrong	2	- Have PS to instruct OP make correct. - PRD check appearance inside 100%. - QCS App and PRD App check function 200%.	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-	-	-
62	Assembly 2	Correct direction	(1) Customer's requirement/agreement	Wrong direction	Function NG	4	OP make wrong	2	- Have PS to instruct OP make correct. - PRD check appearance inside 100%. - QCS App and PRD App check function 200%.	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-	-	-
63	Assembly 2	Correct position	(1) Customer's requirement/agreement	Wrong position	Function NG	4	OP make wrong	2	- Have PS to instruct OP make correct. - PRD check appearance inside 100%. - QCS App and PRD App check function 200%.	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-	-	-
64	Assembly 2	Correct quantity	(1) Customer's requirement/agreement	Wrong quantity	Function NG	4	OP make wrong	2	- Have PS to instruct OP make correct. - PRD check appearance inside 100%. - QCS App and PRD App check function 200%. - Control quality of part by jig.	2	16	Risk acceptance but need monitoring the result of risk	-	-	-	-	-	-
65	Assembly 2	Good appearance of parts (nozzle, Cap)	(1) Customer's requirement/agreement	NG appearance (burr, dirty, contamination)	Out of appearance spec	1	Op didn't detect because not clear Appearance spec	2	- ICM check sampling AQL. - Check sampling 3pcs/ID after cleaning by microscope - Check 100% QC appearance	3	6	Risk acceptance	-	-	-	-	-	-
66	Assembly 2	Check jamming by click 3 times	(1) Customer's requirement/agreement	Not check 3 times	Not detect jamming defect if click not enough 3 times	3	OP make wrong	2	Have PS to instruct OP make correct	2	12	Risk acceptance but need monitoring the result of risk	-	-	-	-	-	-
67	Assembly 2	Check jamming by click 3 times	(1) Customer's requirement/agreement	Click more 3 times	Make click times will not enough 500 or 100 if click test jamming over 3 times	3	OP make wrong	2	Have PS to instruct OP make correct	2	12	Risk acceptance but need monitoring the result of risk	-	-	-	-	-	-
68	QC Appearance 1	Can detect if product structure is incorrect	(1) Customer's requirement/agreement	Cannot detect if product structure is incorrect	Flow out NG product to customer	3	Operator skip checking items	1	- Make clear and easy to understand criteria in PS, with appropriate figure/image - Make clear inspection order in PS - Training operators based on PS/JBS (Job breakdown sheet) - Test skill Operators	3	9	Risk acceptance	-	-	-	-	-	-
69	QC Appearance 1	Can detect if product structure is incorrect	(1) Customer's requirement/agreement	Cannot detect if product structure is incorrect	Flow out NG product to customer	3	Not identify WIP checked/not yet checked	1	WIP before and after process must be controlled well by separating area and easily recognized	3	9	Risk acceptance	-	-	-	-	-	-
70	QC Appearance 1	Can detect if product appearance is not good (deformed, damaged, broken...)	(1) Customer's requirement/agreement	Cannot detect if product appearance is not good (deformed, damaged, broken...)	Out of internal criteria. Flow out NG product to customer	2	Operator skip checking items	1	- Make clear and easy to understand criteria in PS, with appropriate figure/image - Make clear inspection order in PS - Training operators based on PS/JBS (Job breakdown sheet) - Test skill Operators	3	6	Risk acceptance	-	-	-	-	-	-
71	QC Appearance 1	Can detect if product appearance is not good (deformed, damaged, broken...)	(1) Customer's requirement/agreement	Cannot detect if product appearance is not good (deformed, damaged, broken...)	Out of internal criteria. Flow out NG product to customer	2	Not identify WIP checked/not yet checked	1	WIP before and after process must be controlled well by separating area and easily recognized	3	6	Risk acceptance	-	-	-	-	-	-
72	QC Endface	Endface clean	(1) Customer's requirement/agreement	Endface not clean	Function NG	4	OP not check or not detect	2	- Request OP need read PS before start inspection - Training OP about defect & test skill OP - WIP before and after process must be controlled well by separating area and easily recognized	1	8	Risk acceptance	-	-	-	-	-	-
73	QC Endface	Endface clean	(1) Customer's requirement/agreement	Endface not clean	Function NG	4	Endface machine is error	2	Have daily checksheet to verify machine at beginning of a shift	1	8	Risk acceptance	-	-	-	-	-	-
74	QC Endface	Endface clean	(1) Customer's requirement/agreement	Endface not clean	Function NG	4	Connector to check endface is NG	2	- Daily repolishing by mastercord.	1	8	Risk acceptance	-	-	-	-	-	-

75	QC Endface	Can detect abnormal sound	(1) Customer's requirement/agreement	Cannot detect abnormal sound	Function NG	3	Operator skip checking items	1	- Make clear and easy to understand criteria in PS, with appropriate figure/image - Make clear inspection order in PS - Training operators based on PS/JBS (Job breakdown sheet)	3	9	Risk acceptance	-	-	-	-	-
76	QC Appearance 2 (Apply only for M250 Cleaner Group)	Cap's gap in spec	(2) Common standard	OP not detect out of spec gap	Appearance NG	2	OP not check	1	- Training operator must check carefully. - PS have clear defect picture for OP easy understand - Separate area: before endface & after endface+ app 2 clearly. - Make link PS app 2 in PS endface to assure OP remember need to do QC app 2 process.	3	6	Risk acceptance	-	-	-	-	-
77	QC Appearance 2 (Apply only for M250 Cleaner Group)	SC Attachment holding test	(2) Common standard	OP not detect fail holding test	Function NG	4	OP not check	1	- Training operator must check carefully. - PS have clear defect picture for OP easy understand - Separate area: before endface & after endface+ app 2 clearly. - Make link PS app 2 in PS endface to assure OP remember need to do QC app 2 process.	3	12	Risk acceptance but need monitoring the result of risk	-	-	-	-	-
78	QC Appearance 2 (Apply only for M250 Cleaner Group)	String no fluffing	(2) Common standard	OP not detect string fluffing	Function NG	4	OP not check	1	- Training operator must check carefully. - PS have clear defect picture for OP easy understand - Separate area: before endface & after endface+ app 2 clearly. - Make link PS app 2 in PS endface to assure OP remember need to do QC app 2 process.	3	12	Risk acceptance but need monitoring the result of risk	-	-	-	-	-
79	QC Packing	Correct quantity	(1) Customer's requirement/agreement	Wrong quantity	Wrong quantity as customer order	4	OP make wrong	1	Have PS to instruct OP make correct	2	8	Risk acceptance	-	-	-	-	-
80	QC Packing	Correct quantity	(1) Customer's requirement/agreement	Wrong quantity	Wrong quantity as customer order	4	PS not instruct clearly	1	- Have PS to instruct OP clearly - Label program will check the Qty by scanning	2	8	Risk acceptance	-	-	-	-	-
81	QC Packing	Correct kind of packing material	(1) Customer's requirement/agreement	Wrong kind of packing material	Wrong as customer requirement	4	OP make wrong with other kind of product	1	- Request OP need read PS before start packing - Label program will check the Qty	2	8	Risk acceptance	-	-	-	-	-
82	QC Packing	Correct kind of packing material	(1) Customer's requirement/agreement	Wrong kind of packing material	Wrong as customer requirement	4	PS not instruct clearly	1	- Have PS to instruct OP clearly - Label program detect if not scan label	2	8	Risk acceptance	-	-	-	-	-
83	QC Packing	Have label on box, carton	(1) Customer's requirement/agreement	Not have label on box, carton	Can not traceability	3	OP make wrong	1	Have PS to instruct OP make correct - Label program detect if not scan label	2	6	Risk acceptance	-	-	-	-	-
84	QC Packing	Have label on box, carton	(1) Customer's requirement/agreement	Not have label on box, carton	Can not traceability	3	PS not instruct clearly	1	Have PS to instruct OP clearly	2	6	Risk acceptance	-	-	-	-	-
85	QC Packing	Correct content of label	(1) Customer's requirement/agreement	Wrong content of label	Can not traceability	3	Print label wrong	1	- Clerk check before delivery label to line - Line check with PS before packing	2	6	Risk acceptance	-	-	-	-	-
86	QC Packing	Correct content of label	(1) Customer's requirement/agreement	Wrong content of label	Can not traceability	3	PS not instruct clearly	1	Have PS to instruct OP clearly	2	6	Risk acceptance	-	-	-	-	-
87	QC Packing	Correct packing direction	(1) Customer's requirement/agreement	Wrong packing direction	Wrong as FOV requirement	2	OP make wrong	1	Have PS to instruct OP make correct	3	6	Risk acceptance	-	-	-	-	-
88	QC Packing	Correct packing direction	(1) Customer's requirement/agreement	Wrong packing direction	Wrong as FOV requirement	2	PS not instruct clearly	1	Have PS to instruct OP clearly	3	6	Risk acceptance	-	-	-	-	-

Noted:

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: select 1 of 3 options: (1)Customer's requirement/agreement, (2)Common standard, (3)FOV internal requirement

POTENTIAL FAILURE MODE AND EFFECTS ANALYSIS

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FMEA'S REVISION HISTORY

Preparing Date	PIC	Ver	Old content	New content		
				Description	Reason of change	Change requester
9-Aug-19	Xanh	1	-	-	First issue	XanhGC
9-Jul-20	Xanh	2	None	1/ Add QC Appearance 2 (Apply only for M250 Cleaner Group) . 2/ Cancel using air gun to blow dirty Holder material (Cleaner Product).	1/ Update follow 4-Pr-007-4-Fo-0001-9-RC-0023 2/ 4-Pr-007-4-Fo-001-9-RC-0235	XanhGC
18-Nov-20	Xanh	3	None	Add more item at assembly 2 process	1/ Update follow 4-Pr-007-4-Fo-0001-4-RC-0021 + 4-Pr-007-4-Fo-0001-4-RC-0948	XanhGC
9-Aug-22	Xanh	4	Assembly 2 have 8 item	Remove 4 item	Update same current control	XanhGC
19-Mar-24	PhuongTM	5	1. QC Appearance 1 check jamming by click 3 times 2. None	1. Cancel QC Appearance 1 check jamming by click 3 times 2. QC endface can detect abnormal sound	1. Assembly 2 click test 3 times & QC endface click test at least 2 times so enough for detect abnormal sound and jamming click 2. Add control item same current requirement	PhuongTM
29-Aug-24	Thu DTM	6	N/A	Add item No. 36. 37, 45, 46	Follow 9-PR-0014-9-FO-0001-4-RC-0154	Thu DTM

Confidential

FOV 's property, do not take out without FOV BOM's approval