QFR No - 8000804510

Defect Details

NC No.	8000804510
NC Date	16/09/2022
NC Submission Date	
Part No.	520PB00102
Part Name	RAW TUBE FOR LH EXTENSION
Supplier Name & Code	101109-TUBE INVESTMENTS OF INDIA LIMI
ETL Plant	1136-ETL Suspension Sanand
Defect Details	DEEP MARK-INSIDE LINE MARK

1. Problem Description

Defect Description	Deep Line Marks in ID
Detection Stage	Inprocess
Problem Severity	Aesthetic
NG Quantity	8
Is Defect Repeatative?	Yes
Defect Sketch / Photo	zmbv35ocemqkce1uvbnl5riy.jpg

Supplier Communication Details

Quality Head Email ID	anandms@tii.murugappa.com
Plant Head/CEO Email ID	BhatnagarS@tii.murugappa.com
MD Email ID	mukeshahuja@tii.murugappa.com

2. Stock Details & action taken for NG parts

Location	ETL End	Warehouse	Transit	Supplier FG	Supplier WIP	Total
Total Qty	2100	0	0	1000	400	3500
Check Qty	2100	0	0	1000	400	3500
NG Qty	8	0	0	0	0	8

Action taken on NG part

Scrap	8
Rework	0
Under Deviation	0

Containment Action
1. All available CL tubes segregation done at both ETL & TI Sanand WH and identified with blue marker inside tube ID. 2. All available Long Length tubes segregation done at TI Sanand WH and identified with blue marker inside tube ID. 3. No stock available at plant in Long length.

3. Process Flow

Process Flow Description
Plant Process Flow :- Slitting - Tube rolling - Annealing - Wet Process - Push Pointing/Swaging - Final drawing - Straightening - Cutting - ECT - Inspection - Packing - Dispatch to TI Sanand WH. Sanand WH Process Flow :- Inward Inspection - Storage - Cutting - Deburring - Cleaning - Inspection - Packing in Bins - Dispatch to ETL Sanand.

4. Process Details

Process / Operation	Wet process & Tube drawing
Outsource	No
Machine / Cell	Draw Bench
Machine / Cell No.	40T Draw Bench

5. Problem Analysis

Type	Possible Cause	Fact Verification	Jud
Man	Operator Skill	Verified through Gemba observation and found Operator Skill as per Matrix	O
Material	Hollow ID mark tube	Verified through Simulation and found that ID mark generated	O
Material	Hollow tube ID wet	Verified through Simulation & found the (ID Scoring mark) defective part generated for this cause.	X
Tool	Plug damage	Verified through Simulation and found that ID mark/scoring mark generated	O

6. Inspection Method Analysis (Current)

Inspection Method	Other
Other Inspection Method	Visual. (By finger)
Check Point at Final Inspection	Yes
Checking Freq.	Sampling
Sampling	No
Sample Size	5 Nos

7. Root Cause Analysis (Occurance)

Why 1	ID score mark tubes found at Customer ETL end in Cut Length.
Why 2	Plug pick up mark in drawing.
Why 3	Inside diameter of the tube wet
Why 4	Sucker side Dryer fan not working.
Why 5	Plug got pick up mark due to Wet ID.
Root Cause (Occurance)	Hollow tube ID wet

Root Cause Analysis (Outflow)

Why 1	ID score mark tubes found at Customer ETL end in Cut Length.
Why 2	Not detected during final inspection.
Why 3	Inspection done as per sampling plan Ref. IS 4711 - 1974
Why 4	By system design
Why 5	

Root Cause (Outflow)	Inspection was done on sampling basis. (IS 4711 - 1974)

8. Countermeasure (Occurrence , Outflow & System side Actions)

Type	Countermeasure Details	Responsibility	Target Date	Actual Date	Status
Occurance	Sucker side dryer fan rectified	Mr. Jadhav	22/08/2022	21/08/2022	Completed
Outflow	1. 100 % Inspection will be done at both ends of the tube. (Next three Lots) 2. Sampling qty will be doubled during final inspection. (IS 4711 - 1974)	Mr. Sangmesh	23/09/2022	20/09/2022	Completed

9. Inspection Method After Customer Complaint

Change In Inspection System	Yes
Change Details	1.100 % Inspection will be done at both ends of the tube. (Next three Lots) 2. Sampling qty doubled during final inspection. (IS 4711 - 1974) 3. On draw bench during first off , 2nos & hourly Visual. (By finger)
Inspection Method	Other
Other Inspection Method	Visual (By finger)
Check Point at Final Inspection	Yes
Checking Freq.	100%
Sampling	No
Sample Size	100%

10. Evidance of Countermeasure

Occurance (Before)	Left side sucker Fan was not working. 253_Occurance_Before.pptx
Occurance (After)	Sucker side dryer fan rectified. 253_Occurance_After.pptx
Outflow (Before)	Inspection was done on sampling basis. (IS 4711 - 1974) 253_Outflow_Before.pptx
Outflow (After)	1. 100 % Inspection will be done at both ends of the tube. (Next three Lots) 2. Sampling qty will be doubled during final inspection. (IS 4711 - 1974) 253_Outflow_After.pptx

11. Horizontal Deployment

Horizontal Deployment Required	Yes
Applicable Machine / Model / Plant	Applicable for all CDW tubes.

12. Document Review

Documents	InspCheckSheet
Specify Other Document	NO

13. Effectiveness Of Action

Reviewed Quantity	1134
Reason for submission	VERFIED 1134 NOS. RAW TUBE PART FOUND OK. VERIFICATION WAS MADE FOR 5 LOTS 100%.