QFR No - 8000803430

Defect Details

NC No.	8000803430
NC Date	08/09/2022
NC Submission Date	
Part No.	520FW04602
Part Name	CLUTCH HOUSING FULL FINISHED
Supplier Name & Code	100656-MADHURA DIE CAST PVT.LTD
ETL Plant	1132-ETL K-226/1 TRANSMISSION
Defect Details	POROSITY-POROSITY OBSERVED LEVEL L5/L6

1. Problem Description

Defect Description	POROSITY OBSERVED LEVEL L5/L6
Detection Stage	Inprocess
Problem Severity	Function
NG Quantity	4
Is Defect Repeatative?	No
Defect Sketch / Photo	

Supplier Communication Details

Quality Head Email ID	madhuradiecast@gmail.com
Plant Head/CEO Email ID	madhuradiecast@gmail.com
MD Email ID	madhuradiecast@gaikegroup.in

2. Stock Details & action taken for NG parts

Location	ETL End	Warehouse	Transit	Supplier FG	Supplier WIP	Total
Total Qty	500	0	0	3500	500	4500
Check Qty	500	0	0	3500	500	4500
NG Qty	4	0	0	3500	500	4004

Action taken on NG part

Scrap	4004
Rework	0
Under Deviation	0

Containment Action
All Component are hold & rejected at our end. 4000 Nos rejected.

3. Process Flow

Process Flow Description
1.Casting 2.fetling 3. CNC 1st Set-up 4.CNC 2nd Set-up 5.Final Inspection.

4. Process Details

Process / Operation	Casting
Outsource	No
Machine / Cell	HPDC
Machine / Cell No.	HPDC NO.04

5. Problem Analysis

Type	Possible Cause	Fact Verification	Jud
Tool	1.3W4S Housing MSI insert gate area got erosion.	We checked whether the die is erosion or not	X
Tool	Cooling system of die	Cooling system of die found ok condition	O
Tool	Venting system of die	Die loading and unloading inspection sheet checked found ok	O
Machine	Plunger velocity 1ST stage	Velocity of plunger checked as per process standard sheet found	O
Tool	Temperature of die	Temperature of die found as per process sheet	O
Machine	Plunger velocity is 2nd stage	Velocity of plunger checked as per process standard sheet found	O
Machine	Multi pressure 3rd stage	Multi stage pressure checked as per process standard sheet found	O

6. Inspection Method Analysis (Current)

Inspection Method	Other
Other Inspection Method	X- Ray test feq less
Check Point at Final Inspection	No
Checking Freq.	Sampling
Sampling	No
Sample Size	NA

7. Root Cause Analysis (Occurance)

Why 1	3W4S Housing MSI insert gate area got erosion.
Why 2	Heat zone was created.
Why 3	The heat zone created at the gate area thickness was low 73.25mm.
Why 4	
Why 5	
Root Cause (Occurance)	The heat zone created at the gate area thickness was low 73.25mm.

Root Cause Analysis (Outflow)

Why 1	X-ray testing frequency was less.
Why 2	X-ray testing plan not available.
Why 3	
Why 4	
Why 5	

Root Cause (Outflow)	X-ray testing frequency was less.

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

Type	Countermeasure Details	Responsibility	Target Date	Actual Date	Status
Outflow	1. X-ray testing frequency changes once in a year to Quarterly.	QA Engineer	01/10/2022	05/10/2022	Completed
Occurance	1.In 3W4S Housing MSI insert modified at gate area radius is R1 and R3. 2.Material gate area dimension modified up to 75.00mm. 3.Die inspection check sheet is implemented at loading and unloading on machine stage.	Production Supervisior PDC	12/10/2022	14/10/2022	Completed

9. Inspection Method After Customer Complaint

Change In Inspection System	Yes
Change Details	1. X-ray testing frequency changes once in a year to Quarterly.
Inspection Method	Other
Other Inspection Method	X-ray Testing
Check Point at Final Inspection	No
Checking Freq.	Sampling
Sampling	No
Sample Size	NA

10. Evidance of Countermeasure

Occurance (Before)	1..3W4S Housing MSI insert gate area got erosion. 2.Material entry gate area dimension found 73.25mm against 75.00mm. 249_Occurance_Before.png
Occurance (After)	1.In 3W4S Housing MSI insert modified at gate area radius is R1 and R3 as shown by a green circle. 2.Material gate area dimension modified up to 75.00mm. 3.Porosity level on part found L1/L2 249_Occurance_After.png
Outflow (Before)	X-ray testing frequency was less. 249_Outflow_Before.jpg
Outflow (After)	X-ray testing frequency changes once in a year to Quarterly. 249_Outflow_After.png

11. Horizontal Deployment

Horizontal Deployment Required	Yes
Applicable Machine / Model / Plant	K70 Housing Clutch

12. Document Review

Documents	ControlPlan, PFMEA, AuditCheckSheet
Specify Other Document	Testing Plan

13. Effectiveness Of Action

Reviewed Quantity	4000
Reason for submission	1)No recurrence of defect phenomenon, 2)X Ray Inspection frequency optimized from once in year to Quarterly