QFR No - 7000827149

Defect Details

NC No.	7000827149
NC Date	23/03/2022
NC Submission Date	
Part No.	533KU00102
Part Name	ROD GUIDE
Supplier Name & Code	204749-GKN SINTER METALS PRIVATE LIMI
ETL Plant	1126-ETL Pantnagar
Defect Details	NOT AS PER SPECIFICATION-Chamfer profile not OK

1. Problem Description

Defect Description	Chamfer profile not OK - Step observed at chamfer of Rod guide (533KU00102)
Detection Stage	Inprocess
Problem Severity	Fitment
NG Quantity	5000
Is Defect Repeatative?	No
Defect Sketch / Photo	

Supplier Communication Details

Quality Head Email ID	Bhaskar.Dhalawade@gknpm.com
Plant Head/CEO Email ID	Purushottam.Rishi@gknpm.com
MD Email ID	Rajesh.Mirani@gknpm.com

2. Stock Details & action taken for NG parts

Location	ETL End	Warehouse	Transit	Supplier FG	Supplier WIP	Total
Total Qty	5000	25000	0	0	0	30000
Check Qty	5000	25000	0	0	0	30000
NG Qty	5000	25000	0	0	0	30000

Action taken on NG part

Scrap	0
Rework	30000
Under Deviation	0

Containment Action
Part can not be reworked at WH or Customer end , all parts (30K) called back for rework at GKN end

3. Process Flow

Process Flow Description
Mixing > Forming > sintering > Barreling > Chamfering > Sizing > 100% inspection > oil dipping > Final inspection > dispatch

4. Process Details

Process / Operation	Sizing
Outsource	No
Machine / Cell	K40
Machine / Cell No.	Szing_ K40 Cell

5. Problem Analysis

Type	Possible Cause	Fact Verification	Jud
Machine	Tool alignment issues	Sizing die, top punch, bottom punch, core rod clearance checked and found within 0.020mm (OK)	X
Machine	Free flow of material at inclind chamfer face during sizing process	Chamfer profile check by contour graph tracing ; curvature observed on chamfer face	O
Method	Chamfer profile not checked in sizing	Vrified control plan for chamfer angle check ; chamfer angle is checked in chamfering process howeve	O
Man	Unskilled operator	Skill matrix verified ; found OK	X
Machine	Chamfering tool worn out	Chanfering core rod inspected and found OK	X

6. Inspection Method Analysis (Current)

Inspection Method	Instrument
Other Inspection Method	
Check Point at Final Inspection	Yes
Checking Freq.	Sampling
Sampling	No
Sample Size	2

7. Root Cause Analysis (Occurance)

Why 1	Curvature shape profile of C`bore chamfer causes sharp edge at the end of chamfer
Why 2	Free flow of material at incline chamfer face during sizing process
Why 3	Chamfer area not supported by tool at incline portion in sizing process
Why 4	Degree not provided on sizing tool while sizing
Why 5	
Root Cause (Occurance)	Degree not provided on sizing tool while sizing

Root Cause Analysis (Outflow)

Why 1	Abnormal profile of core rod could not get detected during sizing inspection
Why 2	Abnormal chamfer in sizing process not detected by inspector
Why 3	Chamfer not checked by inspector in sizing process
Why 4	Chamfer check not mentioned in sizing QC (Only checked in chamfering process)

Why 5	
Root Cause (Outflow)	Chamfer check not mentioned in sizing QC (Only checked in chamfering process)

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

Type	Countermeasure Details	Responsibility	Target Date	Actual Date	Status
Outflow	. Control plan to be updated for adding chamfer inspection during sizing operation	Ajay Shinde	08/04/2022		Completed
Occurance	2. Core rod design to be modified : chamfer profile to given on core rod instead of using plain core rod.	Ajay Shinde	08/04/2022		Completed

9. Inspection Method After Customer Complaint

Change In Inspection System	Yes
Change Details	chamfer degree inspection during sizing operation
Inspection Method	Instrument
Other Inspection Method	
Check Point at Final Inspection	Yes
Checking Freq.	Sampling
Sampling	No
Sample Size	2 / batch

10. Evidance of Countermeasure

Occurance (Before)	
Occurance (After)	
Outflow (Before)	
Outflow (After)	

11. Horizontal Deployment

Horizontal Deployment Required	
Applicable Machine / Model / Plant	

12. Document Review

Documents	
Specify Other Document	

13. Effectiveness Of Action

Reviewed Quantity	
Reason for submission	