

Action plan

Dt.: 13 Feb 2023

CONDITIONS FOR OCCURRENCE

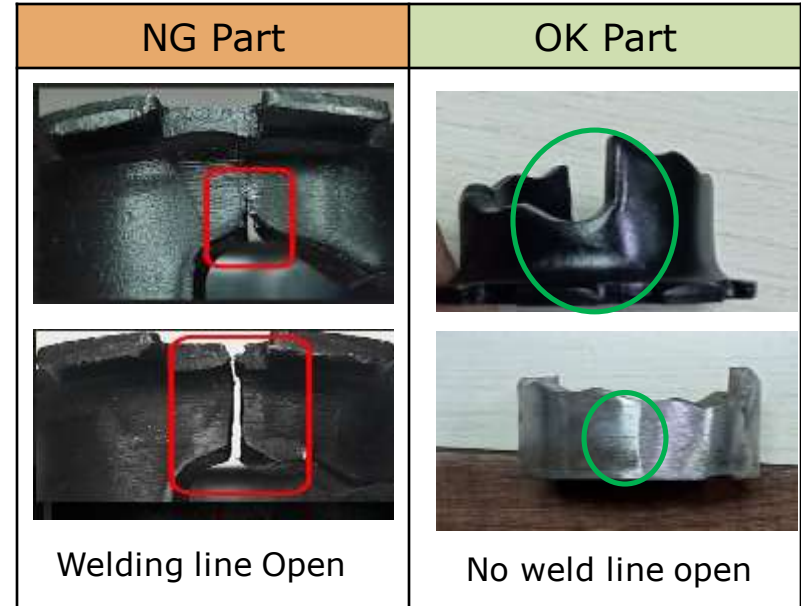
- **Phenomenon:** Welding line open parts.

- **Supplier:** Endurance tech.
- **Model:** Kawasaki
- **Parts name:** Adjuster
- **Part No.:** S2AB044120
- **Date of Occurrence:** 13.02.2023
- **Qty NG:** 4000 Nos.

- Parts Stock check results

Action


Trouble content

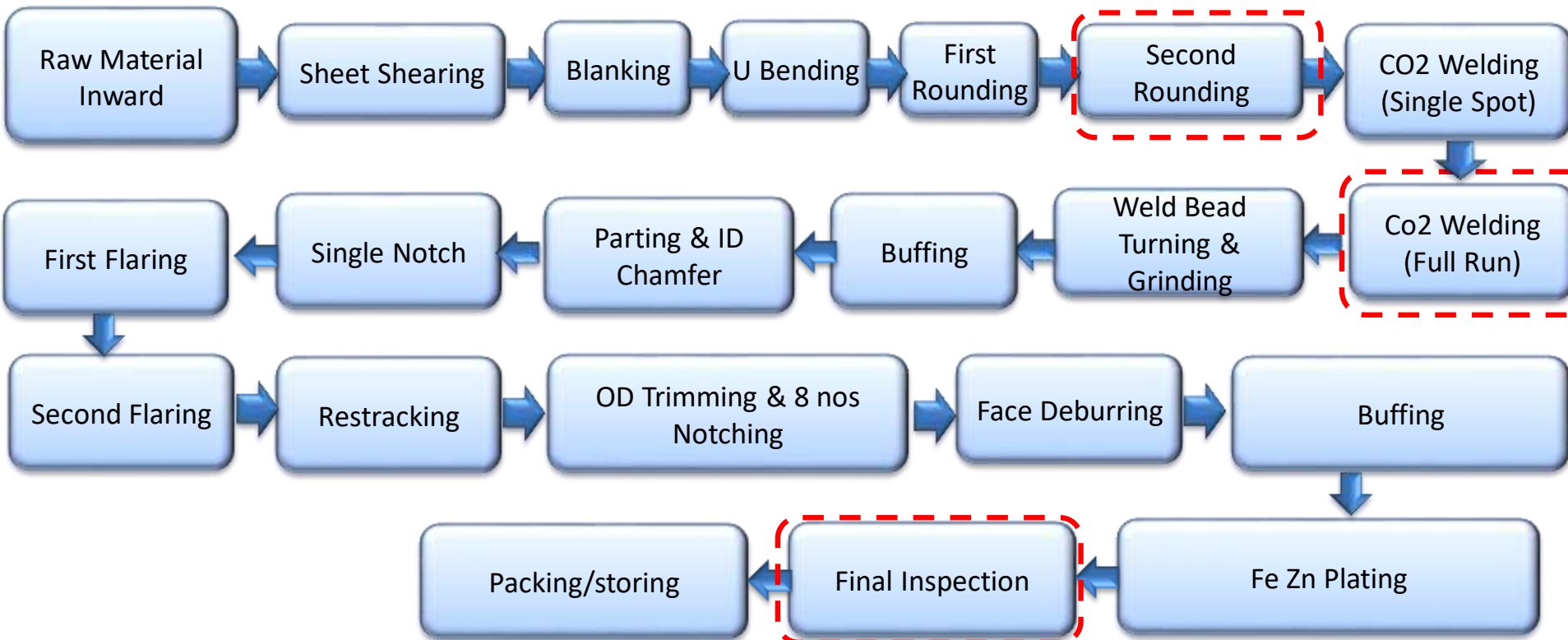


Area	Total Stock	Checked	Checking Method	NG Qty	Status
ETL – K120	4000	4000	Visual check	4000	All available stock qty. Rejected

UNDERSTANDING OF ACTUAL CONDITION AND CONTROL

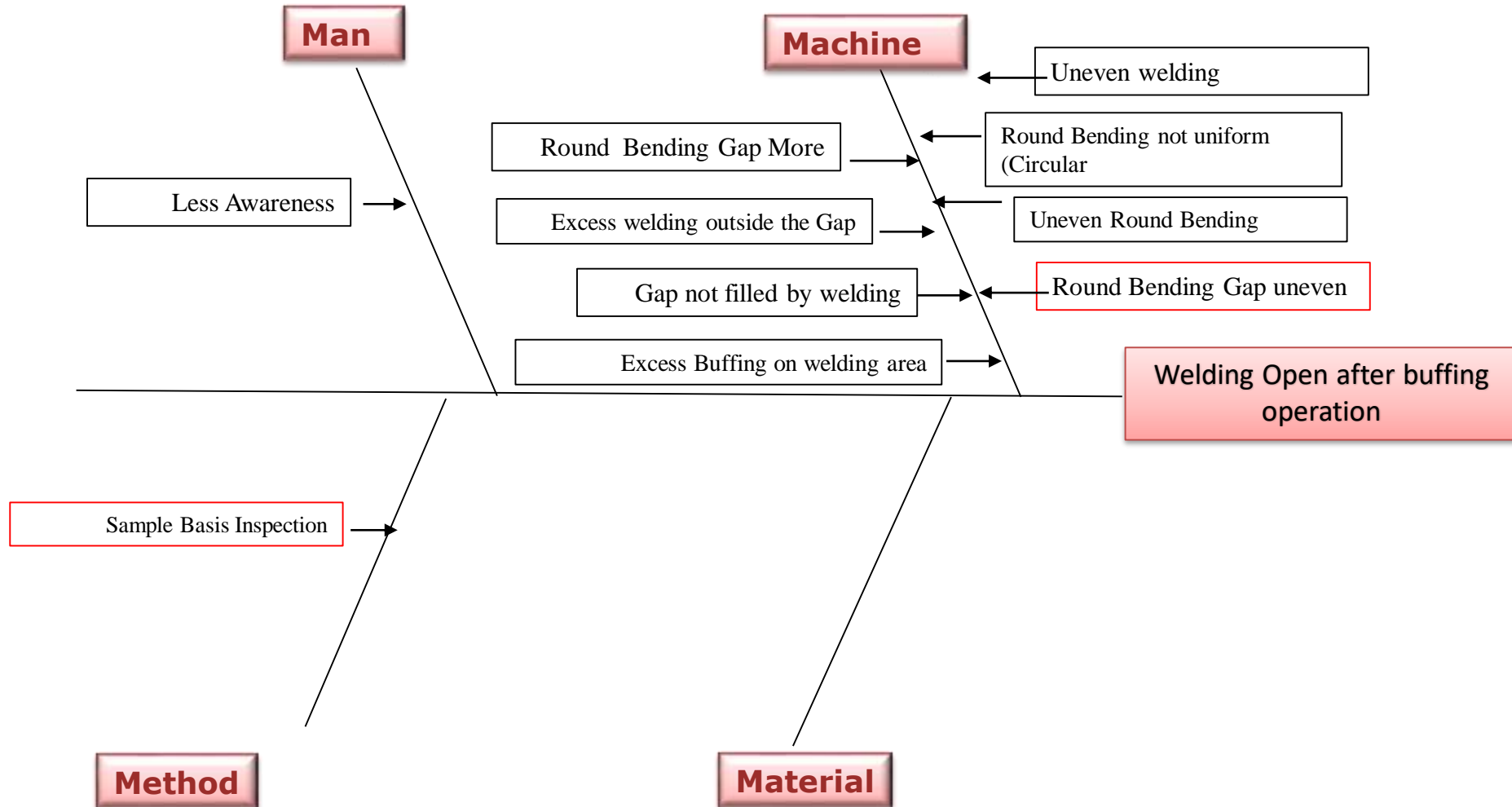
Process Flow

 Possible defect occurrence area.



UNDERSTANDING OF ACTUAL CONDITION

• Understanding the actual cause – (Factor analysis)



FACTS VERIFICATION



#	3M	PROBABLE CAUSES	FACTS VERIFICATION	Jud.
1	MAN	Less Awareness	Operator and inspector not aware about the weld line open	○
2	MACHINE	Round Bending not uniform (Circular)	Round bending observe uniform (Circular)	○
		Uneven round bending	Height variation in both side as well as uneven gap	△
		Round bending gap uneven	In a few part observed uneven gap at top side less (0.54 mm) and bottom side more (1.44 mm)	△
		Excess welding outside the gap	No Excess buffing observed	○
		Gap not filled by welding	Gap fully filled by welding operation	○
		Excess buffing on welding bead area	No Excess buffing on welding line	○
		Uneven Welding	Welding run verified and observed evenly (In straight line)	○
4	METHOD	Sample basis Inspection	While welding and buffing operation only do the sample basis inspection	△

ROOT CAUSE ESTABLISHMENT

(WHY-WHY ANALYSIS)







• Root cause establishment (Why-Why Analysis)

	WHY – 1	WHY- 2	WHY -3	WHY-4	Why-5	Why-6
Occurrence	Welding Open after buffing operation	Uneven round bending / Round bending gap uneven	Ram entry less or raw material spring back			
Outflow	Welding Open after buffing operation	No Inspection after the buffing operation				

Conclusion

- Uneven round bending / Round bending gap uneven
- Ram entry less or raw material spring back
- No Inspection after the buffing operation

COUNTERMEASURES

	Cause	Countermeasure	Tgt. Dt.	Status
Supplier End	<Occurrence >	<ul style="list-style-type: none"> Before Welding operation 100% inspection starts for uneven round bend. 	14-03-2023	Completed 
		<ul style="list-style-type: none"> 100% inspection starts after welding operation. 	14-03-2023	Completed 
		<ul style="list-style-type: none"> Draw route process to be introduce instead of welding process. 	14-03-2023	Draw operation completed it's working on notching operation 
Supplier / ETL End	<Outflow>	<ul style="list-style-type: none"> 200% Inspection started along with marking at inner side at Final Inspection. 	14-03-2023	Completed 
		<ul style="list-style-type: none"> Q-Alert display at Final inspection and welding stage. 	14-03-2023	Completed 
		<ul style="list-style-type: none"> Training given concern operator and inspector for uneven bending and welding open after the buffing process. 	14-03-2023	Completed 

Welding process and draw route process :



Draw operation completed it's working on notching operation

Q-Alert display at work places :

 Q-Alert		 Q-Alert	
Doc.No:SEPL/QA/46 Rev. No:00 Rev. Date: 01/08/2017		Doc.No:SEPL/QA/46 Rev. No:00 Rev. Date: 01/08/2017	
SAPTAGIRI ENGINEERING PVT.LTD.		SAPTAGIRI ENGINEERING PVT.LTD.	
 Possible / Reported Defects : Welding Crack.		 Possible / Reported Defects : Uneven Round Bending Gap	
Customer : Endurance Technologies Ltd. (K-120) Date :18-02-2023 Part Name :Adjuster Part No : S2AB044120		Customer : Endurance Technologies Ltd. (K-120) Date :18-02-2023 Part Name :Adjuster Part No : S2AB044120	
Q- Alert !!!		Q- Alert !!!	
OK	NOT OK	OK	NOT OK
 <p style="text-align: center;">No welding crack</p>	 <p style="text-align: center;">Welding crack (Weld line open after buffing operation)</p>	 <p style="text-align: center;">Even gap from top to bottom i.e. 1.5 mm</p>	 <p style="text-align: center;">Top side gap less 0.54 mm</p> <p style="text-align: center;">Bottom side gap more 1.44 mm</p> <p style="text-align: center;">Uneven gap from top to bottom</p>
No welding crack (No weld line open)	Welding crack (Weld line open after buffing operation)	Even gap from top to bottom i.e. 1.5 mm	Uneven gap from top to bottom "Top side gap less 0.54 mm" "Bottom side gap more 1.44 mm"
MUNJA HORE (QA ENGG.) Prepared By	NITIN WAGADE (QA HOD) Prepared By	MUNJA HORE (QA ENGG.) Prepared By	NITIN WAGADE (QA HOD) Prepared By

Training record :

Awareness training for weld line open after forming operation

100% Inspection
Identification mark

Awareness training for uneven gap for welding

Training Attendance			
Date: 14-02-2023			
Subject of Training : Uneven gap for welding			
Shop : Press shop / welding shop			
Date of training given : Mr. Dhirej Patil / 14-02-2023			
Name of Trainer / faculty : Mr. Kishor Gore			
Sr.No	Name	Dept	Sign
1)	Pravin Topwal	Supervisor (Prod)	[Signature]
2)	Hemant Bhosale	— (Prod)	[Signature]
3)	Somadhan Thorge	Operator	[Signature]
4)	Ambadas Citran	operator	[Signature]
5)	Ujjanag Nayare	operator	[Signature]
6)	Anant Chuse	operator	[Signature]
7)	Vishwajeet Patil	Quality Supervisor	[Signature]

Training Attendance			
Date: 14-02-2023			
Subject of Training : weld line open while forming operation			
Shop : Press shop			
Date of training given : S. Patel and Raju Gairwad			
Name of Trainer / faculty : 14-02-2023			
Sr.No	Name	Dept	Sign
1)	Dhruvhar Patil	Supervisor (Prod)	[Signature]
2)	Ninad Bhargav	Supervisor (QA)	[Signature]
3)	Sanjay Patil	operator	[Signature]
4)	Raju Inhatkar	operator	[Signature]
5)	Crashan Gairwad	operator	[Signature]
6)	Somnath Chuse	operator	[Signature]

200 % Inspection weld crack (Weld line open)



THANK YOU