

**ENGINEERING PRODUCTS  
FOR THE FUTURE**

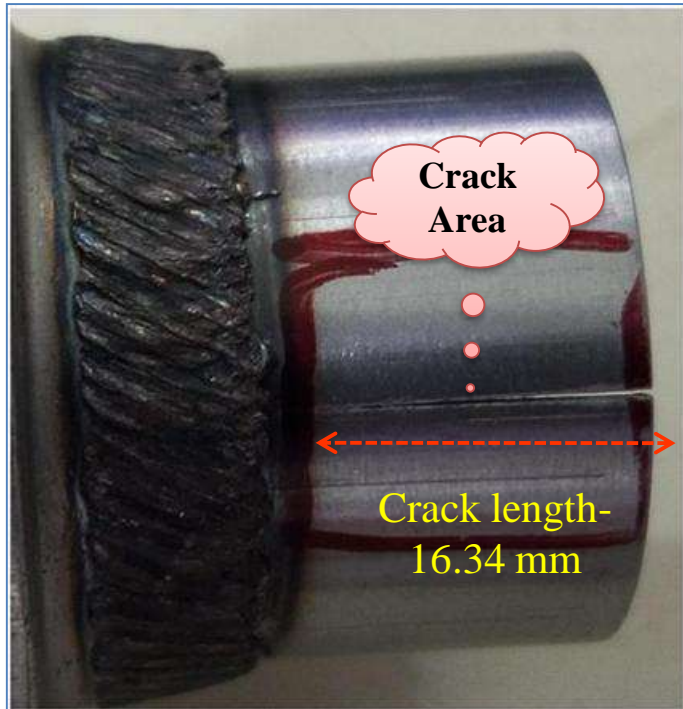


**TUBE PRODUCTS OF INDIA  
SHIRWAL**

**27.50X25.50-Saptagiri-Crack sample analysis**

**12-Dec'2022**

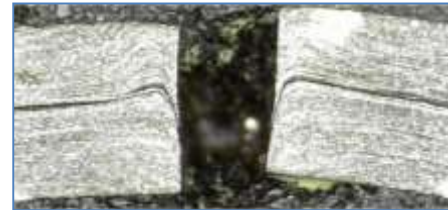
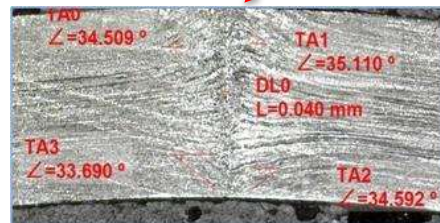
# Sample Details



Batch Code:  
02-11-22 T

Elements	%C	% Mn	%S	%P	%Si
Crack	0.088	0.34	0.013	0.016	0.007
Spec Min					
Max	0.12	0.60	0.040	0.040	

**Remark:-** Chemical Analysis by spectro Method does Conforms

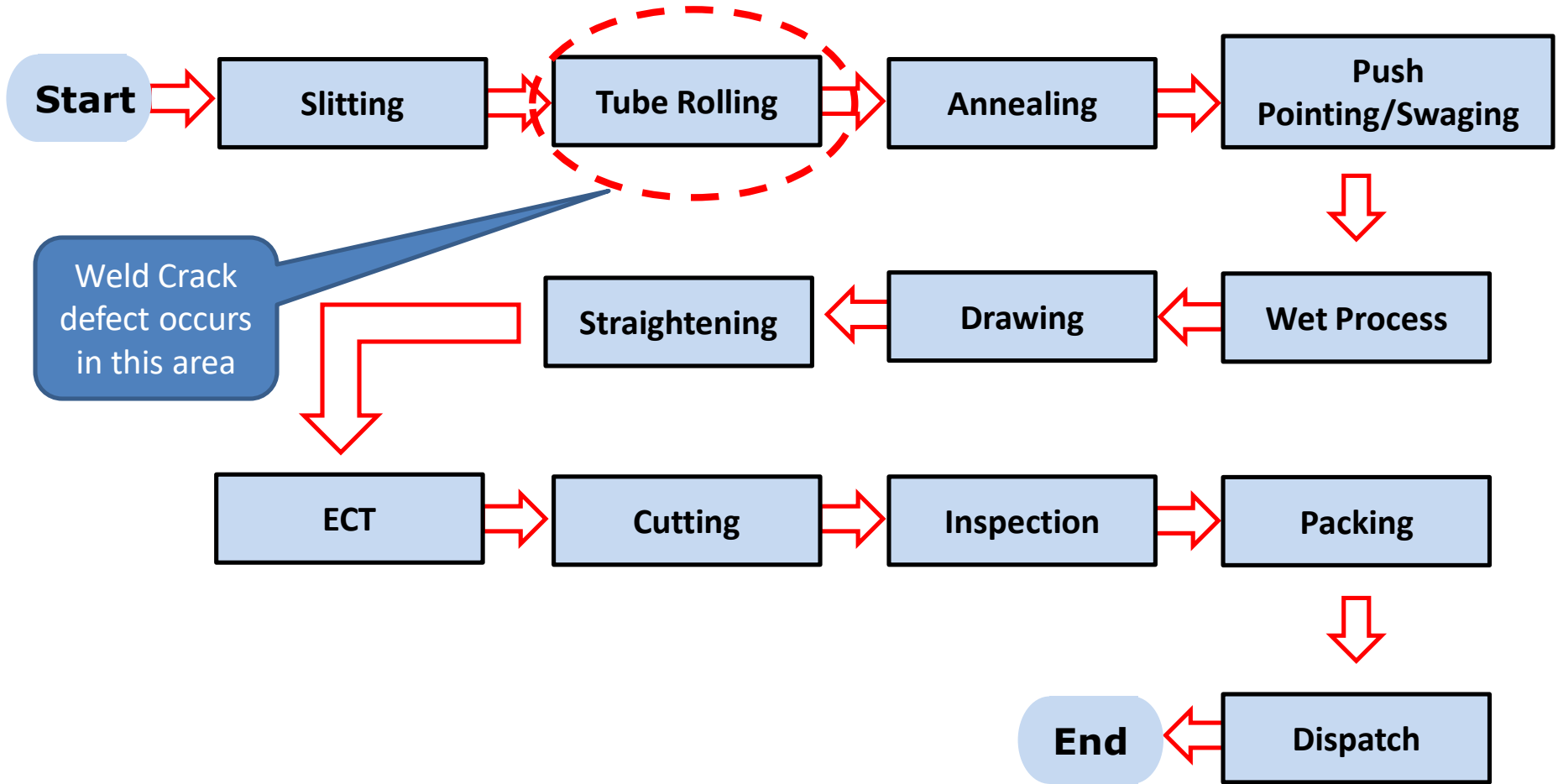


## Observations:-

- 1) Crack observed on the weld line
- 2) Sample C location butting observed skewed.

# Process Flow

## CDW Tube Process Flow



# (WHY-WHY ANALYSIS)

## • Root cause establishment (Why-Why Analysis) - Occurrence

WHY – 1		WHY- 2	WHY -3	WHY-4	Why-5
Weld Crack	Weld forge lines and weld bond plane not ok	Incorrect butting at localized area during rolling.	Deformed strip edge could be at middle of coil.	Freak case	

## • Root cause establishment (Why-Why Analysis) - Detection

WHY – 1	WHY- 2	WHY -3	WHY-4	Why-5
Weak weld at localized area	Not captured in our regular weld testing.	Testing is on sampling basis.		
Weld crack	Weld was intact during ECT Testing.	Opened in subsequent operation.		

## Occurrence Side Action

Sr. No	Cause	Countermeasure	Target. Date	Status
1	Deformed strip edge at middle of coil.	<p>1) Stringent Inspection of both sides of slit coil will be carried out for edge deformation/damage by un-rapping the coil before loading to Uncoiler, Instead of doing inspection directly on uncoiler.</p> <p>2) After Inspection operator will mark the edge damage area with Yellow paint. After loading on uncoiler entry line operator will cut the defective area with additional ok 0.50 meter portion both side.</p>	12/12/2022	Completed.
2		<p>1) Ensuring the Slit coils receipt with wooden planks at incoming stage.</p>	Ongoing.	Completed.

## Detection side Action

1	Tube made after removal of defective portion from this slit.	<p>1) Weld test frequency doubled for such coils.</p>	12/12/2022	Completed.
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# Slit Coil Receipt at incoming stage.



Wooden planks.



# Thank you !



## Contact

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