

**ENGINEERING PRODUCTS
FOR THE FUTURE**



**TUBE PRODUCTS OF INDIA
SHIRWAL**

**30X28 – Crack sample analysis and Action Plan.
Saptagiri Industries Pvt Ltd, Aurangabad.**

27th-Nov-2024

Complaint details

Customer Name : M/s. Saptagiri Industries Pvt. Ltd.
Location : Aurangabad.

Defect :- Weld Crack.

Size :- 30X28X4650.

Complaint Date :- 22nd Nov-2024.

Invoice No. 3048010001064.

Supplied Date – 05.11.24.

Supplied Qty – 6305.0Mtrs.

Plant Invoice No. - PSH-LST-19624 & 19628.

Supplied Date – 28th & 29th Nov-2024.

Date of sample received :- 26th Nov-2024.



Observations :-

- 1) Crack observed to received samples.
- 2) Pressing mark observed at crack side.
- 3) Batch code date 11.11.2024.

Elements	%C	% Mn	%S	%P	%Si	%Al
Spec	0.12 Max	0.60 Max	0.04 Max	0.04 Max	-	-
Sample-1	0.0876	0.527	0.0146	0.0163	0.005	0.0411
Sample-2	0.0943	0.524	0.0153	0.0175	0.005	0.0415

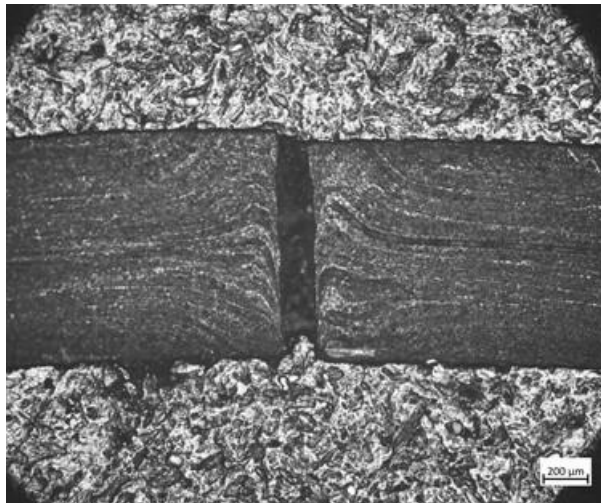
Observations :-

- 1) Chemical composition observed within specification.

Sample photo

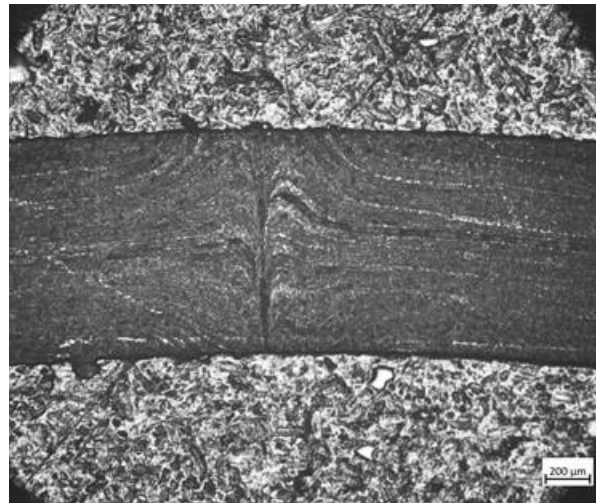


Micro@A-Weld-25x



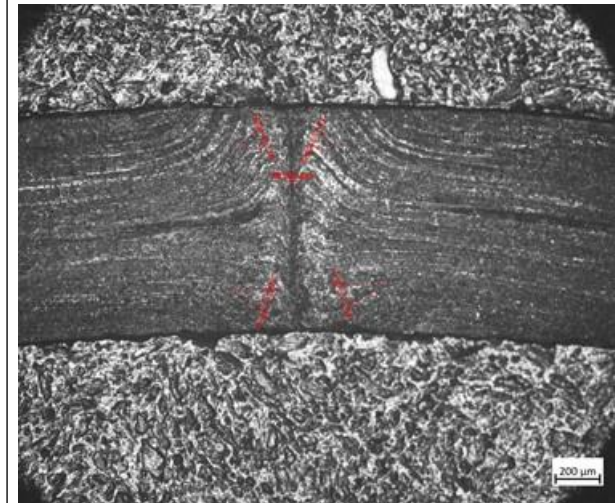
Crack observed on weld line.

Micro@B-Weld-25x



Weld flow observed ok

Micro@C-Weld-25x

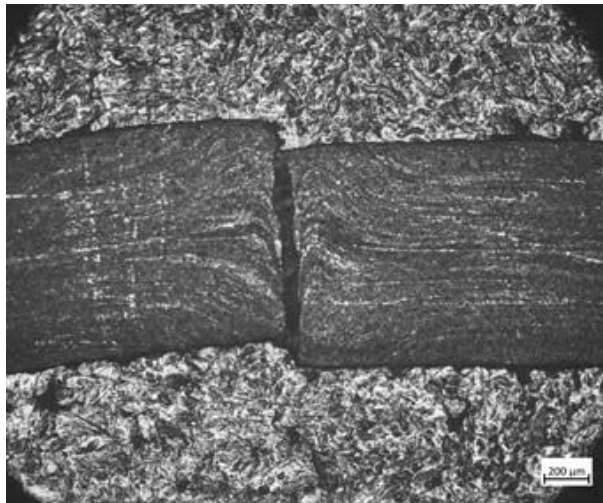


Weld flow observed ok

Sample photo

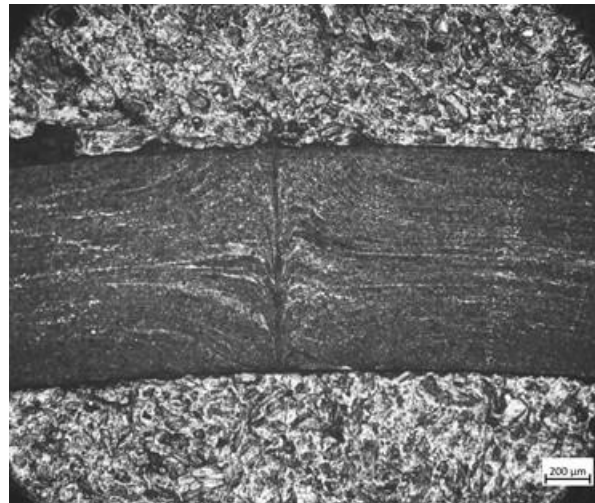


Micro@A-Weld-25x



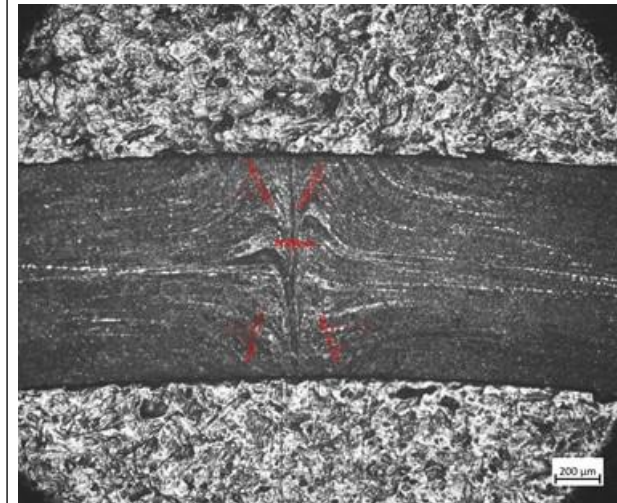
Crack observed on weld line.

Micro@B-Weld-25x



Weld flow observed ok

Micro@C-Weld-25x



Weld flow observed ok

● Root cause establishment (Why-Why Analysis) - Occurrence

WHY – 1	WHY- 2	WHY -3	WHY-4	Why-5
Weld Crack.	Insufficient fusion during squeezing and welding.	Less heat at localized area.	Mill jerk and strip breathing problem.	Sizing gear box Coupling chain broken.

● Root cause establishment (Why-Why Analysis) - Detection

WHY – 1	WHY- 2	WHY -3	WHY-4	Why-5
Weld crack.	Tube got opened during welding assembly pressing operation at Endurance end.	Less bonding strength.	Not detected in online ECT.	Weld was intact.

Occurrence Side Action

Sr. No	Cause	Countermeasure	Target. Date	Status
1	Sizing gear box Coupling chain broken.	1. Chain and coupling to be replaced annually and point added in TBM Schedule .	26 th Nov-2024	Completed.

Detection Side Action

1	Detection.	1. Disposal action Point added in stoppage matrix to take care during Such stoppage.	26 th Nov-2024	Added.
---	------------	--	---------------------------	--------

Thank you !



Contact

Corporate Office:

Tube Investments of India Ltd.
 "Dare House", 234 N S C Bose Road,
 Chennai- 600 001, India.

☎ +91 44 42177770

📠 +91 44 42110404

✉ info@tii.murugappa.com