Manufacturing Industry

CASE STUDY

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Key Facts

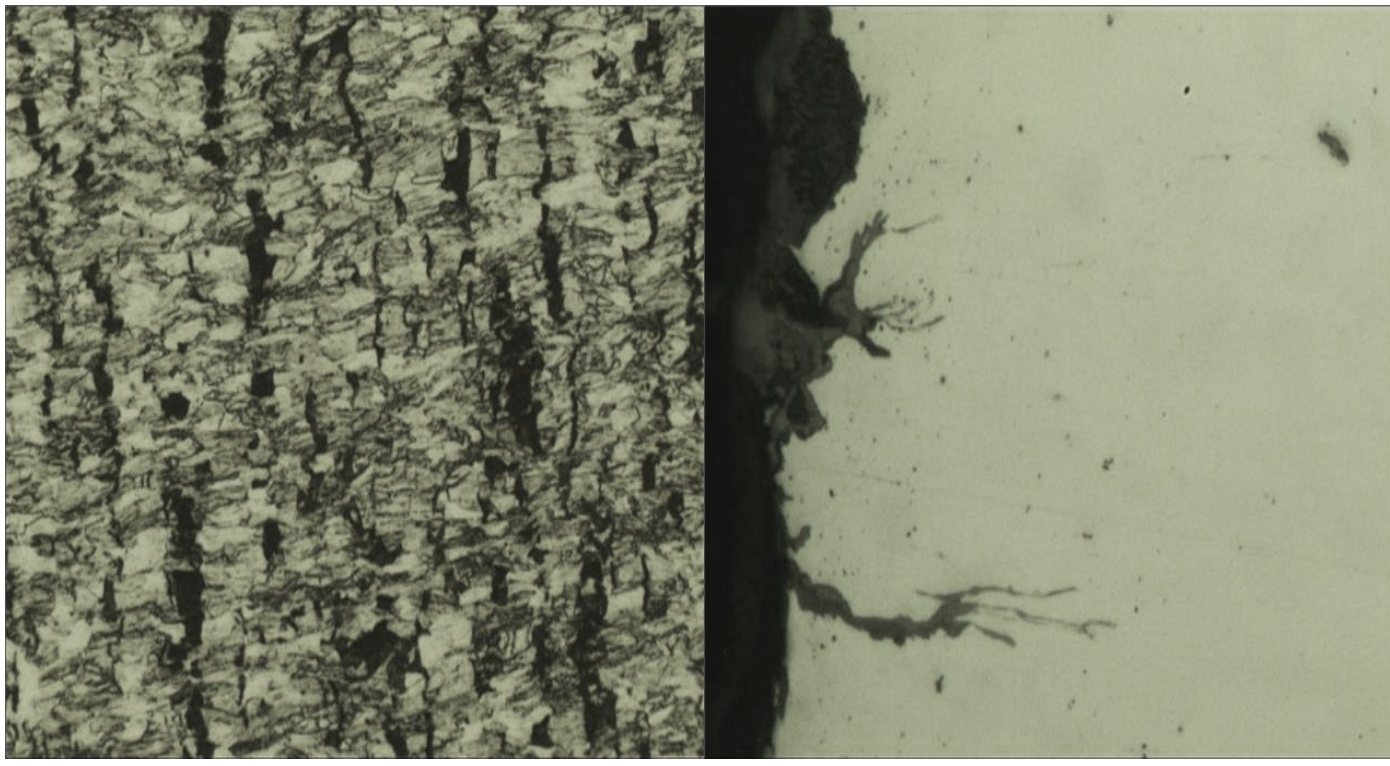
Sector	Manufacturing Industry
Category	Investigation of 3" Equal TEE

Problem

- 3" equal tee of heat cracked into two pieces while lifting during installation.
- MOC of the tee is ASTM A 234 grade WPB

Diagnosis

- The tee failure is under the combined influence of cold worked condition and scale entrapment from raw material stage leading to brittle failure.
- The metallurgical condition barring MOC is not satisfactory.



Solution/Recommendations

- The crack initiation leading to breakage appears to be from the edges where entrapped scale acted as stress concentration site.
- The tee microstructure indicates heavy cold worked condition.
- The raw material before tee forming should undergo proper NDT to ensure freedom from any scale entrapment.
- The raw material of tee should be in properly heat treated condition and also should undergo normalizing heat treatment after cold forming as per the specified requirement.

Contact Us

If you are interested to learn more about TCR Advanced,
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