The leak on riser pipe is essentially because of the damage to the coating and subsequent erosion corrosionerosi

Oil and Gas Industry

CASE STUDY

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Key Facts

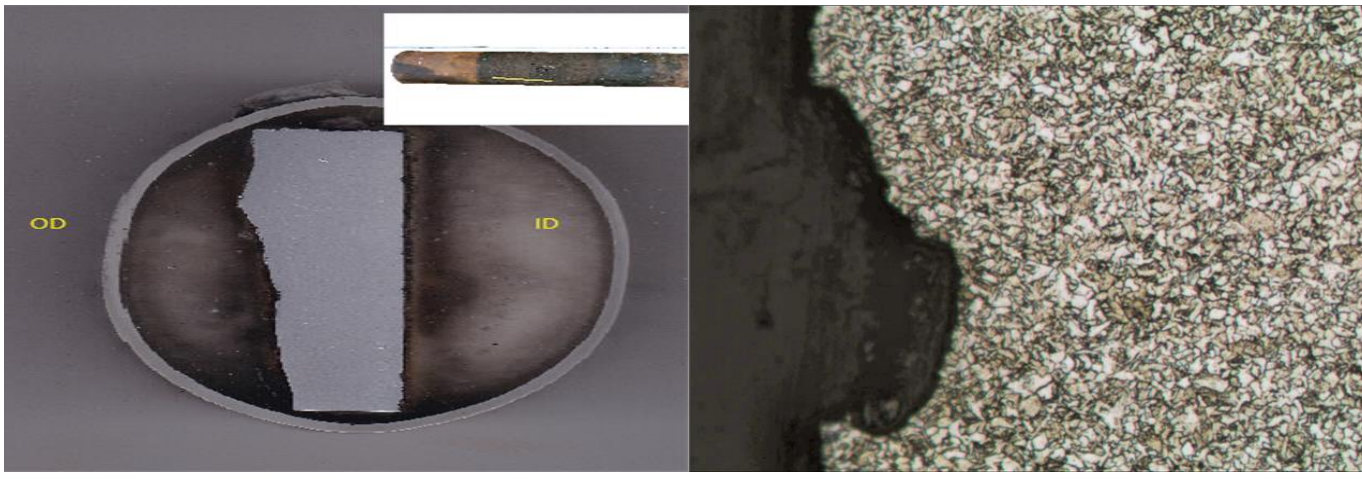
Sector	Oil and Gas Industry
Category	Investigation of 14"PC riser line

Problem

- 14" PC riser in line leaked at the splash zone after 20 years of service life.
- The leak was noticed during an unplanned shutdown activity when a gas cloud was observed at the PC platform and PC riser pressure started decreasing.
- MOC of the line is API 5L X52 with neoprene coating on external surface

Diagnosis

- The production tubing was punctured due to pitting corrosion mechanism attributed either due to CO2 corrosion during shut-in period or possibly because of use of contaminated/acidic CaCl2 solution.



Solution/Recommendations

- The riser pipe metallurgy in terms of MOC, microstructure and mechanical properties is normal.
- Localized thinning is observed only from external surface at the face of pipe having through and through opening.
- Damaged coating condition seems to have prevailed as thinning is seen only in localized area from external surface.
- Periodic visual inspection of piping would provide early detection of damage to the coating and corrective action may be initiated accordingly.
- The affected areas of damaged coating of pipe need corrective action.

Contact Us

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