

# CORROSION AS MAJOR FACTOR IN SEVERAL FAILURE CASES

**BUDAU Victor, CRACIUNESCU Corneliu M.**

Universitatea "Politehnica" din Timisoara

[budau@mec.upt.ro](mailto:budau@mec.upt.ro), [craciunescucm@yahoo.com](mailto:craciunescucm@yahoo.com)

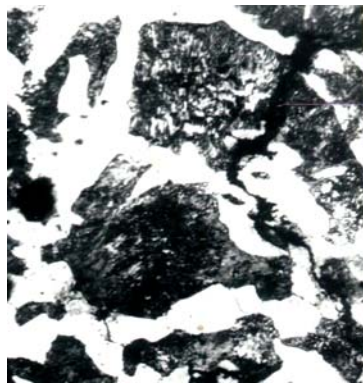
**Keywords:** corrosion, failure analysis, microscopic investigations, case studies

**Abstract:** The main phenomena causing the premature failure of a product are: wear, fatigue, corrosion or combinations of these aspects.

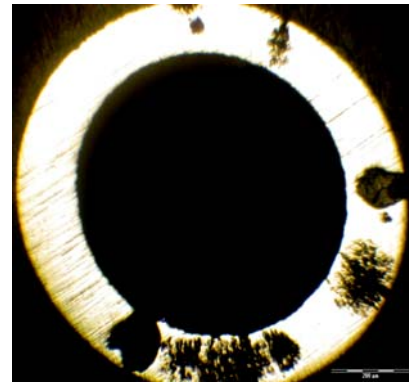
Starting from these considerations the paper shows 3 cases of failures (gas recipient- fig. 1; connecting screw – fig. 2; syringe needle – fig. 3) for which the corrosion phenomena was the determinant factor leading to the malfunction of the product.



*Fig. 1 Corrosion cavern in the welding joint of a gas recipient*



*Fig. 2 Intra-crystalline crack originating from corrosion pits existing in the surface of the connecting screw*



*Fig. 3 Local corrosion advancing up to the penetration of the needle wall thickness*

For each case, the main factors that contributed simultaneously to the failure are analyzed and the influence of corrosion as a main factor is highlighted.

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