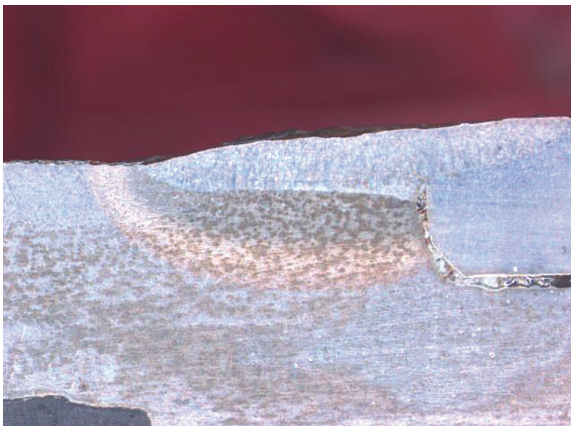
Studies and investigations regarding the dangers due to the effect produced during 50 years by welds applied to the outer surface of the subset "pipe crossing"

Goal of the project:
Establish the influence of the weld upon the lifetime of the pipe crossing subset from a gas supply system

Short description of the project:
The project analyzed the behavior of the pipe crossing subset in corrosive environment compared with the joining of the parts without using weldEng.



Project implemented by:
S.C. MMG S.R.L. located in Baia Mare, Romania

Implementation period:
August 2012 – September 2012

Main activities:
The activities developed for the project included:
•comparative analysis of design solutions;
•establish of the factors that can influence the corrosion behaviour of the pipe crossing part;
•assessment by calculus of the lifetime of the part in both design variants;
•experimental study of the parts behaviour in corrosive environments;
•metallographic analysis of the potential harmful sections for both constructive designs.

Results:
Experimental and analytic estimation of the life cycle of the studied part; the study conducted established that the lifetime of the examined parts is lower than 50 years, which is the lifetime recommended by the normatives

Fields of interest:
Materials science, corrosion, failure analysis

Financed through/by:
S.C. MMG S.R.L. located in Baia Mare, Romania

Research team:
Assoc. Prof. Dr. Eng. Aurel Răduță, director of the project, Assoc. Prof. Dr. Eng. Mircea Nicoară, Assist. dr. Cosmin Locovei

Research centre:
Research Centre for Processing and Characterisation of Advanced Materials

Aplicability and transferability of the results:
The company intends to improve the constructive solutions and to study furthermore in cooperation with the Politehnica University of Timisoara the possibility of testing the corrosion degree in service of the pipe crossing part.

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