

## **Multielemental Analysis Of Soil Solution In Contact With API 5L X70 Steel**

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Soils and metals often produce a combination that leads to metal corrosion. Evaluation of the soil corrosiveness has been based on physical and chemical properties, as pH and electrical conductivity. Different types of soils show a characteristic corrosivity when in contact with metallic materials. With aim to avoid or minimizing corrosion attack some alternatives have been doing developed to protection of metallic structures but without take account the nature and the mechanism of corrosion process due to metal-soil interaction. Besides, there are other variables that contribute to corrosion such as the chemical species presents in the soil profile. New developments have been carried out and the liquid part of the soil, here called soil solution, was extracted and the chemicals elements were analyzed. Then, the soil solution from three types of soil – Arenic Hapludalf, Typic Quartzipsamment and Typic Haplaquox – obtained by centrifugation method were tested in metallic material to improve better understanding how and which intensity occurs corrosion attack. For this, were tested coupons of steel API 5L X70 which main application are in pipelines with requirements under or over surface. The results showed that applied methodology is appropriated to this approach.

### **Palavras-Chave:**

corrosion, API steel, soil corrosiveness, pipelines