



LABORATÓRIO NACIONAL
DE ENGENHARIA CIVIL

TESTING
and METROLOGY

UEC

MATERIALS DEPARTMENT

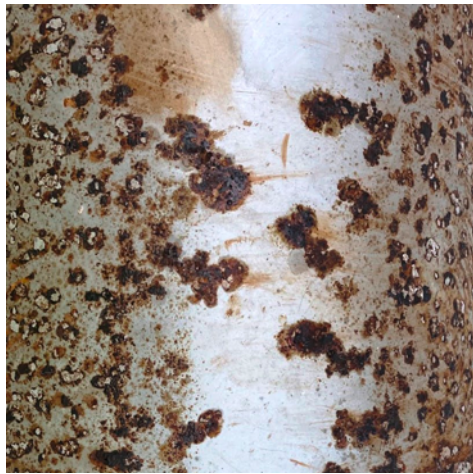
Laboratory for
Electrochemistry, Corrosion
and Protection of Materials

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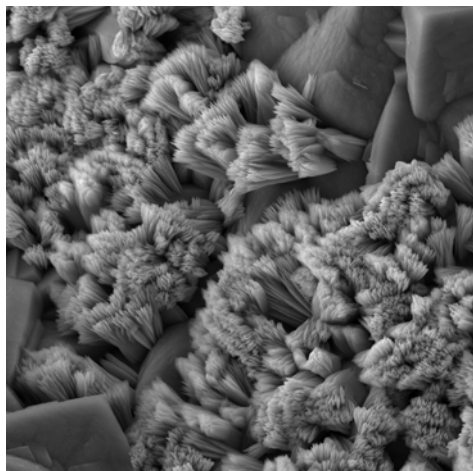
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Scope

The Laboratory for Electrochemistry, Corrosion and Protection of Materials (EU) of LNEC-EM is integrated in the Materials Department / Organic and Metallic Materials Unit of LNEC. The UEC has an infrastructure that helps support the execution of R&D&I studies and OAC&T with a view to assess the performance of metallic materials and anti-corrosion coatings, as well as to prevent and mitigate corrosion.

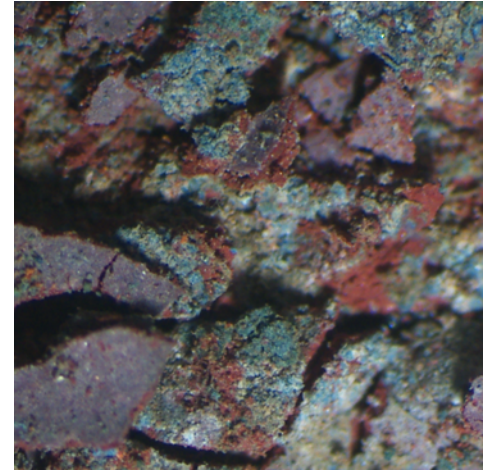
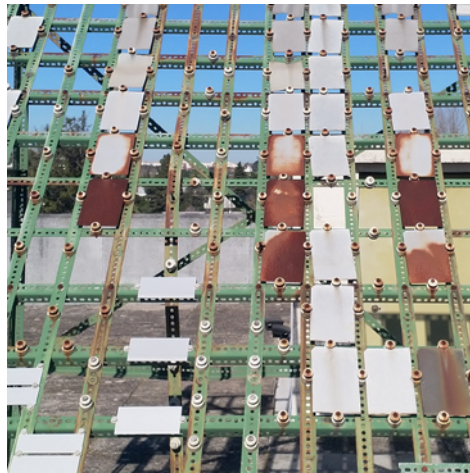


Its contribution is essential to prevent and minimise risks and costs associated to the degradation of metallic materials with wide application in several types of structures, infrastructures, components and decorative features.



Field of expertise

The UEC carries out activity within the framework of the evaluation of the performance of metallic materials and anti-corrosion coatings as well as at the level of the diagnosis and monitoring of corrosion and the evaluation of the corrosiveness of the settings. The UEC has the appropriate technological and human resources for conducting several tests, including the monitoring and the non-destructive inspection of corrosion, the evaluation of the corrosion velocity and potential, the corrosion resistance under stress, as well as the appraisal of systems and products for protection against corrosion and prevention. These resources are adapted to a great variety of development and application sectors (construction and management of the built environment, maintenance and monitoring of infrastructures, producers of metallic products and components, among others).



Highlights

The results of the UEC activity, which are often included in multidisciplinary studies, contribute to the resilience and sustainability of metallic materials and to the development of products and solutions for protection and prevention of their deterioration. Special mention is made of the support to the research and expert advisory backed by high resolution experimental means and analysis techniques, which make it possible to carry out the remote monitoring of corrosion, as well as the electrochemical, topographical and morphological characterisation at both micro and nanoscales.

