Course organizers: Anna Igual Munoz (EPFL, Switzerland) Nuria Espallargas (NTNU, Norway) Stefano Mischler (EPFL, Switzerland) collaboration with

Course – Introduction to tribocorrosion



Group for Research and Education
Advancement in Tribology/corrosion

In many engineering situations materials' surfaces are exposed to mechanical loadings or abrasion in combination with a corrosion attack. The interaction between mechanical and corrosive phenomena is called tribocorrosion.

Tribocorrosion is found in a great variety of engineering applications such as valves and pumps for chemicals, biomedical implants, power plants, marine installations and many others. Tribocorrosion can not be predicted solely by considering corrosion and tribology separately but requires an integrated approach.

This course is intended to give the participants a basic background in tribocorrosion.

This course will introduce you to the main concepts of corrosion and tribocorrosion, the description of the involved phenomena, the main experimental techniques and of the existing interpretation tools and examples illustrating how to apply the theoretical background into real practice. At the end of the course participants will have the tools to identify and to approach tribocorrosion problems.

Course content



Introduction to basic concepts of corrosion (15 min)



What is tribocorrosion? (15 min)



Experimental methods in tribocorrosion (15 min)



Interpretation tools and modelling in tribocorrosion (15 min)



Practical cases and discussion (30 min)