

Session Atmospheric corrosion

Atmospheric corrosion is controlled by complex electrochemical and physical processes taking place in a thin film on a metal surface with dynamically changing composition and properties. A number of mainly *in situ* analytical techniques helped to improve our understanding of these processes dramatically. Still, the complexity of real systems exposed under varying conditions in view of both external factors such as the relative humidity, temperature and concentration of air pollutants and internal factors such as composition and physicochemical properties of precipitated corrosion products and interplay between metal micro elements make any transfer of the scientific knowledge into practical means of corrosion prevention challenging.

The session organized by the EFC Task Force *Atmospheric Corrosion* brings together academic research groups with deep fundamental knowledge and modelling capabilities and industry end-users with their practical needs in terms of efficient anticorrosion measures applicable in atmospheric exposure conditions, user friendly modelling tools and long-term predictive models in order to develop solutions helping to reduce costs of corrosion protection of structures and objects exposed to atmosphere.

Focus of the session in 2020 will be on **corrosion and protection at cut edges**. Cut edges of metal sheets are often vulnerable to corrosion due to a generally lower level of protection. The mechanism of cut edge protection is complex including aspects such as barrier protection by thinner or incomplete paint systems, galvanic protection by metallic coatings or fillers, leaching out of inhibiting species and formation of protective corrosion products. The efficiency of cut edge protection is affected by coating thickness, cut morphology, water electrolyte conductivity, humidity cycles, and many other parameters. Both fundamental and practical presentations are invited in order to foster intense exchange on this subject.

As every year, the session will also provide a platform for exchange of knowledge, information and ideas between scientists, researchers and industry on the following topics:

- Improvement of the understanding into corrosion processes in thin electrolytes formed under atmospheric conditions.
- Predictive models for atmospheric corrosion.
- Best practices of field and laboratory testing.
- Development of corrosion monitoring techniques applicable in atmosphere.
- Corrosion in new environments, e.g. severe marine industrial atmospheres and micro climates.
- Protection of novel materials including weathering, stainless and coated carbon steels and aluminium and magnesium alloys
- Practical experience in corrosion protection of structures and objects exposed to outdoor and indoor atmospheres.
- Standardization activities.

Please submit your abstract online via www.eurocorr.org before January 16, 2020.

I am looking forward to your contribution and participation in EUROCORR 2020 "Closing the gap between industry and academia in corrosion science and prediction" on September 6–10, 2020, in Brussels, Belgium.

Tomáš Prošek
Chair TF Atmospheric Corrosion

Expected duration: 2 days

Expected audience: 50–100 attendees