



WP18@EUROCORR 2018

Minutes of the WP18 session at Eurocorr2019 (Sevilla, September 9-13 2019)

The vibrant city of Sevilla in Andalusia hosted Eurocorr2019 that again offered a high scientific level program combined with good weather, enjoyable local gastronomy and the scenery venue of the historical city of Sevilla. As in the past, Eurocorr2019 was very well organized (thanks to the local committee).

This year the WP18 session at Eurocorr was a particular event as it combined the regular Eurocorr session with a new edition of the successful series of International Tribocorrosion Conferences, (Hyderabad 2006, Vienna 2009, Atlanta 2012, Glasgow 2014, Hyderabad 2016) coordinated by the Tricoronet. This combination was a great success alone by judging on the unprecedented number of tribocorrosion papers (27 talks, 9 posters) that were presented in Sevilla.

As usual, the oral scientific program was structured in sub sessions regrouping specific topics. The first sub session (7 talks) focussed on diverse fundamental and mechanistic aspects of tribocorrosion including repassivation kinetics and their modelling, corrosion inhibitors applied to tribocorrosion, tribocorrosion in organic lubricants, effect of oxygen content in water, tribocorrosion of ceramics and the effect of strain rate on tribocorrosion. The second sub session (9 talks) was dedicated to tribocorrosion in the biomedical field. A large number of papers presented different solutions for alleviating tribocorrosion of biomedical alloys by surface treatments. Other papers discussed fretting corrosion issues as well as tribocorrosion of CoCrMo alloys sliding against cartilage. The third part (7 talks) was devoted to surface technology including techniques such as anodisation, plasma electrolytic oxidation, graphene and TiN coatings. The last sub session dealt with bulk materials with specific issues linked to additive manufacturing, microstructural effects, ion implantation and the characterisation of non-passive alloys for tribocorrosion systems. The poster session offered the same wide spectrum of topics and applications as the oral program.

This Sevilla edition of the Tribocorrosion session was again very rich in scientific quality and diversity of contents reflecting the wide range of technical implications of tribocorrosion. Very important was also the intense discussions following the paper presentations. It is in my opinion essential that we keep and further develop the constructive atmosphere that has characterised so far the tribocorrosion sessions at Eurocorr. In this way we will ensure that our WP18 sessions remain attractive for experienced as well as young tribocorrosionists. This year the oral sessions were followed by a minimum of 38 up to a maximum of 60 delegates (full room).

Moreover, Manel Rodriguez Ripoll (AC2T research) organized a rich business meeting where we had the opportunity to appraise the vision of tribocorrosion in industry thanks to the kind input of Monica Zapponi, researcher at the Tenaris company. In her informal talk entitled "Tribocorrosion in oil production" she pointed out that industry is conscious of potential tribocorrosion problems but for the time no generally accepted code of practices or standards are available to face such problems. Therefore, it is difficult to find a consensus among involved industrial partners on solution

paths. Interestingly similar concerns were formulated by industrial partners during the business meeting held in Prague in 2017. Promoting the establishment of such kind of code of practices for industry is certainly a mission in which WP18 should take part. Thus there was a general consensus to create a reflection group on this topic under the leadership of Manel Rodriguez Ripoll.

During the business meeting we learned about the newly established Institute of Biomaterials, Tribocorrosion and Nanomedicine (IBTN, <https://ibtn.lab.uic.edu/>) Fatih Toptan of University of Minho (Guimaraes, Portugal) and head of the European Branch of IBTN presented the aims and structure of this network dedicated to biomaterials and implants for medicine and dentistry including tribocorrosion as one of the main scientific aspects. The network is based in different research institutes located in Chicago (IL-USA) and has branches in Brasil and Europe. Due to the common interests, IBTN proposed to create links with WP18 with the aim to generate mutual benefits. Indeed, a collaboration with IBTN would offer the possibility to strengthen the contacts of WP18 with America and with the local biomaterial activities. Fatih Toptan and Stefano Mischler will study the different collaboration possibilities.

Stefano Mischler

Chair of WP18 Tribocorrosion

European Federation of Corrosion

http://efcweb.org/WP+Tribo_Corrosion-p-104114.html