

MINISYMPOSIUM

FATIGUE FAILURE ANALYSIS AND ENVIRONMENTALLY ASSISTED FATIGUE

1. Thematic session title

Fatigue Failure Analysis and Environmentally Assisted Fatigue (FFAEF)

2. Organizers, including affiliations

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4. Short description of the symposium including the scope and target public

The session is an invitation to Authors with experience in fatigue analysis. Within the framework of the session, all experimental work related to failure assessment as well as numerical analysis is invited. Particularly invited are works devoted to the issue of microstructural degradation of long-term operating metallic materials. Besides, any work devoted to fundamental fatigue testing and modelling of a life-time in initiation and propagation regime fall within the area of interest of the session. It is also essential to address the environmental factors (hydrogen, seawater, acidic environments, etc.) that have an impact to the fatigue resistance of materials and structures, with a particular focus on the micromechanics of damage to metallic materials. This mini-symposium is an excellent platform for meeting experts from different fields - materials mechanics, materials science, damage engineers, focused on the widely recognised fatigue testing and failure analysis.

The main topics of the work should include:

- Fatigue failure analysis and fatigue lifetime modelling in terms of the experimental and numerical approach;
- Fatigue behaviour of metals and reliability analysis;
- Fractography analysis (quantitative and qualitative analysis, fractals);
- Effects of processing parameters on fatigue and fracture performances;
- Environmental assisted fatigue;
- Hydrogen assisted failure;
- Effect of materials degradation on fatigue

Selected papers of the A-ICMFM2020-FFAEF will be encouraged to be submitted to journals associated with the ICMFM2020. The A-ICMFM2020-FFAEF symposium is envisaged as an ESIS activity promoted by the ESIS-TC12.

Please submit your work by email to nykyfor@ipm.lviv.ua, grzegorz.lesiuk@pwr.edu.pl or icmfmx@pwr.edu.pl with subject A-ICMFM2020-FFAEF.