

## **Minutes of WP5 business meeting held in Moscou during Eurocorr 2010 on Tuesday 14<sup>th</sup> of September**

### **WP5 : Environment Sensitive Fracture**

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WP5 business meeting has been organised during Eurocorr 2010 at Moscou where almost 50 persons have attended at least one of three sessions on 14<sup>th</sup> of September.

25 persons have attended this 50 minutes WP5 business meeting aimed at the presentation of WP5 objectives that have been introduced by K. Wolski and opened for discussion. The need for coupled mechanical and physico-chemical approaches in modelling environmentally assisted fractures has been underlined by participants. New suggestions have arisen, including the wish that WP5 members contribute to the definition of recommendations in dealing with Environment Sensitive Fracture, through joint sessions with colleagues from different application fields. Both general and specific objectives have been approved and will be published on EFC website.

The acting chairman has also explained the way that working parties are supposed to contribute to the progress and dissemination of corrosion sciences.

He has also stressed the benefit for each individual of belonging to the national corrosion society.

### **Below are recalled WP5 overall objective and specific missions :**

**WP5's overall objective** is to bring together scientists and engineers encountering the problem of crack initiation and propagation in different application fields including nuclear, petrochemical and aeronautical industries. In such environments fracture often results from a simultaneous action of mechanical loading and aggressive environment which can be either water or hydrogen or reactive gases or even more specific like liquid metal. The common feature requested for accurate prediction of the remaining lifetime is the need to understand the mechanisms of crack initiation and crack propagation.

**WP5 specific missions** concern the fields of hydrogen induced cracking, stress corrosion cracking, fatigue-corrosion, high temperature corrosion and liquid metal embrittlement and are aimed at

- confronting physico-chemical and mechanical approaches in modelling environment sensitive fracture,
- promoting the use of advanced local investigation methods (AFM, EBSD, Auger/XPS, nanomechanical testing) for submicrometer range description of crack initiation sites and crack-tip characteristics and
- promoting the use of numerical simulations based on multiscale physical approach.
- contributing to the definition of recommendations through joint sessions with colleagues from different application fields.