



# Working Party on **MARINE CORROSION**

MINUTES OF MEETING 14.09.04  
AT ACROPOLIS CONFERENCE CENTRE, NICE (EUROCORR2004  
CONFERENCE)

**Present:**

S. Bond, GB  
C. Dickson, S  
B. Espelid, N (chairman)  
D. Feron, F  
S. Huizinga, NL  
M. Jasner, D  
R. Johnsen, N  
U. Kivisäkk, S  
O. Lahodny-Sarc, HR  
E. Rislund, DK (secretary)  
I. Skalski, PL  
W. Schleich, D

## **1. OPENING AND WELCOME**

The chairman opened the meeting and presented the agenda for approval. The agenda was accepted.

Apologies for absence had been received from the following

L. Berthagen, S  
J. Birn, PL  
R. Francis, GB  
G. Ferrari, NL  
T. Rogne, N

## **2. MINUTES OF LAST MEETING**

The chairman went through the minutes from the Budapest meeting for comments from the audience. The minutes were approved without comments.

In connection to the minutes, where it was mentioned, that the data from the round robin testing in the CREVCORR project should be made available to all the participants, Roy Johnsen was asked to handle this activity on behalf of T. Rogne, who was absent.

## **3. PRESENTATION OF “PROJECT ON THE FORMATION OF PROTECTIVE LAYERS ON Cu-Ni MATERIALS IN SEAWATER”.**

M. Jasner presented a German research project carried out in Gfkorrr regime. The aim was to develop a method for accelerated formation of corrosion protective layers on copper-nickel alloys. The objective of the research is to increase the resistance against erosion corrosion including decreasing the sensitivity to sulphide ions. Materials included are 90/10 and 70/30. Samples to be used are 1” tubes and coupons exposed to water velocities of 1,5 – 2 m/s. Electrochemical noise (ECN) is used for monitoring.

To evaluate the new method to be developed for short time development of protective film, performance would be compared in artificial versus natural seawater the aim being to be able to test reliably in artificial seawater.

After the presentation a discussion followed concerning some of the field and laboratory problems encountered. Mr. Feron referred to the loop necessary for the testing that copper was likely to build up in the loop during the test, and had to be removed in

order to come close to the situation where recirculation is not present. Furthermore no heat transfer is present in the loop, why Mr. Feron asked if the test is realistic.

Mr. Jasner replied, that time is needed for the implementation of new alloys, because they are not resistant to sulphide ions in a virgin condition. So any attempt to improve this situation is applicable.

The chairman would like to know when the results of the testing are available. Mr. Jasner replied, that they are available in 2006, when the funding is finished.

The chairman directed his thanks to Mr. Jasner for his presentation

#### **4. PRESENTATION OF “QUALIFICATION OF STAINLESS STEEL FOR DIFFERENT APPLICATIONS”.**

At the last meeting Gabriele Ferrari was asked to give a presentation at this meeting, but as he was not able to participate, Ulf Kivisäkk had been asked to give a presentation on qualification of stainless steel for tube heat exchangers and umbilicals for the oil industry.

For tube heat exchangers the qualification is based on G-48 results, but some other factors have to be taken into account

Design

Avoid seawater on the shell side

Design curves made by Sintef was used

Examples of service limits

Risk of calcareous deposits

Temperature limit of 60°C in chlorinated seawater.

On the testing side ASTM G-48 was used for quality assurance. Here a limit for superduplex was found to 28°C.

For umbilicals the qualification traditionally has been made by service experience. The trend was however going towards higher temperature, which made the experience less applicable. Testing able to simulate the tube condition is then needed. Here the method developed under Crevcorr can be applied.

## **5. PUBLICATIONS**

Mr. Feron presented the sketch for the publication made from Eurocorr2003 and 2004 papers on Corrosion behavior of copper alloys brasses, bronzes and aluminium alloys in seawater. Some details and ideas were presented and discussed such as including terminology of the topic in the beginning of the book. Other topics as aluminium anodes and sprayed aluminium coatings were presented as a possibility. Kemal Niscancioglu was proposed as an advisor on the aluminium topics. Mr. Feron asked for help to review the received papers.

A new final time schedule for the book could be as follows

Titels for contributions are delivered before end of year. After review and comment the publication could be ready towards the end of next year. Mr. Feron will act as secretary, but others must do the review. Mr. Espelid will send letters to the authors.

Another proposal was a green book on the Crevcorr topics, where the text should be sent to Mr. Feron.

## **6. EFC-MATTERS**

WP 2 has been converted to a Task Force 2 Degradation of steel structures through a STAC decision.

A new WP 19 on corrosion of polymers has been proposed by Gfkorr. The WP is found useful.

The coming Eurocorr conferences are as follows

2005	Lisbon, Portugal
2006	Maastricht, The Netherlands
2007	Germany

The EFC Frankfurt office has been appointed to be the central EFC conference secretariat. The step has been made as a result of varying quality in the organization of the EUROCORR conferences, and the objective is to ensure the level of forthcoming conferences through coordination between the central office and the local organizing committee.

From the recent STAC meeting it was reported that NACE propose a corrosion conference in Europe. It is difficult not to consider such an event as a competition to the Eurocorr events.

The question about erecting a website for the marine corrosion WP was raised again. No comments – pros or cons - were given from the audience.

## **7. ORGANISATION OF THE WORKING PARTY “MARINE CORROSION”**

The chairman stated, that the execution of the CREVCORR project had blocked for other initiatives and activities in the working party, so time has come to revitalize the working party. As he, himself was foreseen to be more involved in activities in his company, he proposed a change in chairmanship in order to ensure sufficient activity in the party. He proposed Ulf Kivisäkk as a new chairman to take over as soon as possible. The party took note of the proposal. The change is to be proposed to and approved by STAC.

## **8. NEXT MEETING**

The chairman stated, that the next meeting is to be organized by the new chairman of the WP. A spring meeting is foreseen, but no place and date was set.

## **9. CLOSURE**

The chairman closed the meeting and thanked the attendants and contributors.

12.05.05

Ebbe Rislund