

EUROPEAN FEDERATION OF CORROSION
EUROPÄISCHE FÖDERATION KORROSION
FÉDÉRATION EUROPÉENNE DE LA CORROSION



CEA-040514-MLL

May 14th, 2004

Minutes of the Paris meeting
April 16th 2004

➤ Present :

BOSCH Rik-Wouter, SCK-CEN, Belgium
FERON Damien, CEA Saclay, France
GILLET Guillaume (afternoon only), CEA Siège, France
GOMEZ BRICENO Dolores, CIEMAT, Spain
LEONARD Marie-Lise, CEA Saclay, France
L'HOSTIS Valérie, CEA Saclay, France
MOLANDER Anders, Studsvik Nuclear AB, Sweden
PIIPPO Juha, CORMET, Finland
RITTER Stefan, Paul Scherrer Institute, Switzerland
VAN DER SCHAAF Bob, NRG, The Netherlands
VANKEERBERGHEN Marc, SCK CEN, Belgium

➤ Apologies for absence received from :

W. Bogaerts, K.U. Leuven, Belgium
T. Dorsch, Framatome ANP, Germany
L. Fournier, CEA/Saclay, France
K. Minkova, NPP, Bulgaria
G. Nagy, KFKI, Hungary
A. Pourbaix, CEBELCOR, Belgium
B. Rosborg, Rosborg consulting, Sweden
A. Roth, Framatome-ANP, Germany
Y. Rouillon, EDF, France

T. Saario, VTT, Finland
B. Stellwag, Framatome-ANP, Germany
S. Van Dyck, SCK-CEN, Belgium
K. Varga, University of Veszprem,
Hungary
J. Vereecken, Université de Bruxelles,
Belgium
O. Wachter, e-on Kernkraft, Germany
P. Wood, Nirex, UK

1. Welcome opening and agenda

D. Féron welcomes the participants and opens the meeting. The proposed agenda is approved.

2. Minutes of the Budapest meeting

The minutes of the Budapest meeting held on September 29th 2004 and referenced CEA-031020-MLL are approved without comments.

It is decided that the minutes of the future meetings will be send only by email to the participants and to the EFC WP4 members.

3. European programs

Corrosion issues related to 3 European programs partly funded by the European Union are presented : Interweld and Lires projects are in the 5th PCRD while PERFECT is in the 6th PCRD.

3.1. Interweld "Irradiation effects on the evolution of the microstructure, properties and residual stresses in the heat affected zone of stainless steels welds" (Annexe I)

B. Vand der Schaaf presents the objectives and goals of this Interweld project which will end in December 2004. The corrosion issues are mainly related to sensitisation and stress corrosion cracking of 304 and 347 stainless steels welds with and without irradiation effects, as shown in Annex I.

3.2. Lires "Development of light water reactor reference electrodes" (Annex II)

R.W. Bosch describes the objectives and the first results of this European Union funded program devoted to high temperature reference electrodes, including testing under irradiation. This project will finish officially next October 2004.

3.3. Perfect "Prediction of irradiation damage effects in reactor components" (Annex III)

M. Vankeerberghen explains the objectives and the structure of this new integrated project with focus on the sub-project entitled "Corrosion & mechanics of internals" as shown in Annex III"

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3.4. Discussion

Large exchanges occurred during these 3 presentations and after, during which obvious links have been put in evidence between these 3 programs.

It could be one of the objectives of the WP4 to increase these exchanges between European Union funded programs where corrosion issues are studied, even if corrosion thematic is not the major or the only thematic of these programs.

The chairman thanks the 3 speakers for their clear and interesting presentations.

4. Structure of the WP4

In order to give more dynamics or to make the WP4 more active, D. Féron proposes the creation of "groups" which could be active on specific items for a short period of time (for instance in order to make a workshop or to publish a "green book) or for a longer period of time (for instance on corrosion in generation IV reactors).

4.1. ECG-COMON (Annex IV)

S. Ritter introduces the proposal for a European cooperative group on corrosion monitoring of nuclear materials. The objectives are the coordination of European efforts on corrosion monitoring of nuclear materials in LWR and nuclear waste disposal environments. Even if the first subject is on electrochemical noise monitoring, the group will deal with other innovative monitoring methods.

The planned organisation of the group is based on exchanges of information and knowledge on a confidential basis, with the organisation of cooperative research and/or round robin programs.

S. Ritter ask if there is a reasonable possibility of integrating the group into the WP4.

M. Vankeerberghen raised the question if the "confidential basis" of the group is compatible with the EFC objectives.

D. Féron suggest that the WP4 and this group need to have links for the benefit of the two parties. He will ask EFC if the "confidential basis" of the ECG-COMON is compatible with the EFC-WP4 way of working.

Anyway, WP4 will be at the kick-off meeting which is planned to be on September 17, 2004 in Nice, the day after Eurocorr'2004.

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4.2. "High temperature electrochemistry in light water reactors" Workshop (see end of Annex II)

R.W. Bosch proposes a special event linked to the end of LIREs program. It could be either a special session during Eurocorr'2005 or Eurocorr'2006, or a specific workshop.

After discussion, it is decided that it will be a special event of the WP4 called "High temperature electrochemistry in light water reactors". This workshop will be held in Belgium. R.W. Bosch is in charge of this event which is planned in June 2005. When the précised dates will be fixed, D. Féron will :

- ask EFC for an EFC event number,
- ask the chairman of the WP on electrochemical methods to propose this event as a common workshop of the 2 working parties.

It is planned to edit the proceedings as a "green book", after the workshop and reviewing of the papers. R.W. Bosch and D. Féron will propose a reviewing committee.

5. Co-ordinated Action "Nuclear corrosion" (Annex V)

The text of the proposal of a Co-ordinated Action called "Nuclear corrosion" is given in Annex V.

M. Gillet Guillaume, CEA officer in charge of Euratom programs, recall some generalities on Euratom work programs and on the co-ordinated actions (CA) :

- The subject "Nuclear corrosion" could be financed by the European Commission in 2005 or 2006.
- Co-ordinated actions are made for exchanges between people. It's "lighter" than a Network of Excellence.
- Co-ordinated actions could fund co-ordination, meetings or workshops, time amount spent in another laboratory in a foreign country. So co-ordinated actions could help to increase and develop the WP4 activities.
- Co-ordinated actions money is not for research, but it is to organize meetings, to pay for books (dissemination of knowledge), for exchanges of personals, ...
- The European Commission could help us to determine the sub-thematic activity.

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After a large discussion, including on the interest of such a co-ordinated action, it has been decided :

- D. Féron will send by email the co-ordinated action text to all the WP4 members.
- This project will be presented in May or June to European Union officers to know their advices about it.
- Special focus on countries which are joining the European Union will be made through the actual WP4 members (Hungary, Czech Republic, ...) and EFC national societies.
- Leaders for specific tasks of the co-ordinated action have to be found.

6. Eurocorr'2004

The WP4 actions during Eurocorr'2004 are presented (Annex VI) and discussed. Two sessions will be organised.

- "The 2nd Workshop on long term prediction in nuclear waste systems",
- a general session focus on light water reactors.

Each session will have published proceedings : the workshop proceedings will be published by ANDRA while a "green book" will be proposed on "corrosion issues in light water reactor" with papers presented at Eurocorr'2003, Eurocorr'2004 and eventually some other European papers.

The workshop session is approved. After a large discussion on the general session, it is decided to suppress the poster session and to include poster papers into the session of oral presentations, which will be extended to the Thursday afternoon. Some other papers related to nuclear corrosion have not been included by Eurocorr organisers in the WP4 session but in other sessions (like the LIREs paper). D. Féron will ask the organisers to put the good papers in the good sessions. Authors could do the same.

7. Eurocorr'2005

Eurocorr'2005 will be held in Portugal (4-8 September, 2005). It is decided that two sessions will be organized :

- a general session related to nuclear corrosion,
- a specific session on "Corrosion issues in future nuclear systems".

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8. Other items

8.1. Information

Information are given about the EPRI workshop on "Electrochemistry & Radiolysis" which will be held on October 15, 2004 in San Francisco.

8.2. List of members

The list of the WP4 Steering Committee members has been updated. The list of the WP4 personal members is not yet updated. Information are given by the participants related to some people of their country (retired, active, ...).

9. Next meeting

Next meeting of the WP4 is planned during Eurocorr'2004 in Nice, on Wednesday 15th September 2004.

10. Closure

The chairman thanks the participants for their active participation and close the meeting.

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Annex I : Interweld Project

Annex II : Lires Project

Annex III : Perfect Project

Annex IV : "Future" group ECG-COMON

Annex V : Co-ordinated Action "Nuclear Corrosion"

Annexe VI : WP4 actions during Eurocorr'2004

Diffusion : WP4 members
Present and apologized participants
P. MacIntyre (EFC Scientific Secretary)
J. Vogelsang (STAC Chairman)
P. Berge (EFC Secretariat in France)

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