



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

**MINUTES OF THE WP4 FALL MEETING
HELD IN STOCKHOLM INTERNATIONAL FAIRS
STOCKHOLM, SWEDEN
WEDNESDAY, SEPTEMBER 7TH, 2011**



Written by:

Damien Féron

Diffusion:

Present and apologized participants

Juliet Ippolito (EFC Scientific Secretary and Public Relation Officer)

Ines Honndorf (EFC Website)

EFC WP4 "NUCLEAR CORROSION"

Chairman	Damien Féron	CEA/Saclay	DEN/DANS/DPC/SCCME	Bât. 458 - PC 50	F-91191 GIF SUR YVETTE Cedex
Vice-Chairman	Thierry Couvant	EDF	DMMC - Les Renardières	BP46	F-77818 MORET SUR LOING Cedex
Secretary	Mylène Belgome	CEA/Saclay	DEN/DANS/DPC/SCCME	Bât. 458 - PC 50	F-91191 GIF SUR YVETTE Cedex



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Attendance:

Edvige Aublant	Areva NP, France
Eric Cavaletti	Areva NP, France
Bob Cottis	Manchester University, United Kingdom
Andres Del Barrio	Tecnalia, Spain
Damien Féron	CEA, France
Maria del Sol Garcia Redondo	Ciemat, Spain
Hans Hoffmeister	Helmut Schmidt University, Germany
David Anthony Horner	Rolls Royce, UK
Fraser King	Integrity Corrosion Consulting, Canada
Bruno Kursten	SCK-CEN, Belgium
Andraz Legat	ZAG, Slovenia
Christina Lilja	SKB, Sweden
Jan Macak	Institute of Chemical Technology, Czech Republic
Digby D. Macdonald	Penn State University, USA
Anders Molander	Studsvik, Sweden
Gen Nakayama	IHI Corporation, Japan
Stéphane Perrin	CEA, France
Juha Piippo	Cormet, Finlande
Philippe René	CEA, France
Stefan Ritter	PSI, Switzerland
Bo Rosborg	Rosborg Consulting, Sweden
Petr Sajdl	Institute of Chemical Technology, Czech Republic
Kazuya Tsutsumi	MHI Ltd, Japan
Borje Wegemar	Westinghouse AB, Sweden

Apologies for absence received from:

Mylène Belgome	CEA, France
Miroslava Ernestova	Nuclear Research Institute Rez, Czech Republic
Catherine Guerre	CEA, France
Valérie L'Hostis	CEA, France
Virginia Madina Arrese	Tecnalia, Spain

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Summary:

1. Opening and approval of the agenda	4
2. Approval of the minutes of the Moscow and Avignon meetings	4
3. EFC internal matters	4
4. EFC WP4 publications	5
5. EFC WP4 events	5
6. EFC WP4 Website	6
7. EUROCORRs	6
8. Missing items, conclusion and closure	6

Enclosures:

* Document available only on the private space of the EFC WP4 website, for WP4 Members

- ✓ Annex 1 Agenda of the Stockholm meeting
- ✓ Annex 2 Slides presented by D. Féron at the Stockholm meeting*
- ✓ Annex 3 Proposed rules for Poster Prize, Oral Prize and Honorary Medal of the WP4*
- ✓ Annex 4 Presentation made by Bruno Kursten*
- ✓ Annex 5 Presentation made by Stephan Ritter*
- ✓ Annex 6 Presentation made by Thierry Couvant*
- ✓ Annex 7 Slides related to the LongTermCor2013 (Japan)*

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1. OPENING AND APPROVAL OF THE AGENDA

D. Féron opened the fall meeting and thanked the audience for coming. Agenda was presented and approved, as no comments were made.

2. APPROVAL OF THE MINUTES OF THE MOSCOW AND AVIGNON MEETINGS

These minutes are approved without comments.

3. EFC INTERNAL MATTERS

After a short presentation of the WP4 (history, objectives, rules), D. Féron presented the objectives of the next 3-year plan and proposed to move the dates of the plan to 2012-2014 (instead of 2011-2013):

- ✓ providing links between European teams and EU funded programs in nuclear corrosion field, with an opening on to the world;
- ✓ initiating and stimulating opportunities of exchanges on scientific & technical subjects related to nuclear corrosion, particularly on today main nuclear research areas: waste systems, water reactors, generation IV and fusion reactors;
- ✓ promoting corrosion science and technical developments by events such as seminars, workshops, publications, etc.

The following actions, already approved during the previous full meeting, are described again with emphasis on bold items:

- ✓ Two WP meetings each year
 - * Spring meeting (more focus on one or few items)
 - * Annual general meeting during EUROCORRs
- ✓ Specific seminars/workshops
 - * During EUROCORRs
 - * In connection with EU programs
 - * On specific subjects
- ✓ Re-activation of the task forces (groups)
- ✓ Webpage: active and attractive
- ✓ Publications: in EFC series (one book per year) and Journals (two publications each year)
- ✓ Development of links between EFC WP4 and nuclear organisations (Euratom, OECD/NEA, UN/AIEA)
- ✓ Summer School "nuclear corrosion"

Some other specific actions were:

- ✓ To reinforced the links with European programs:
 - * Proposal of a workshop on nuclear corrosion with PhDs and post-docs working in the area. This proposal is quite well accepted.
 - * Common events with PERFORM60, PERFECT, ect. (try to exclude meetings at the same date)

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- ✓ To enhance the EUROCORR event and WP4 visibility
 - * We may systematically propose to publish EUROCORR's papers in JNM or an EFC journal. This could be done already this year particularly for the Workshop "Corrosion monitoring in nuclear systems" which is held during this EUROCORR'2011 (Annex 4).
 - * D. Féron proposed also to create two Prizes: one for "poster" and one for "oral" communications (eligible only if the paper is in the proceedings). Another "Honorary medal" of the Nuclear Corrosion Working Party may also be created. It is stated that the Oral Prize has to encourage young researchers. The proposed rules for the Poster Prize, the Oral Prize and the Honorary Medal are proposed (Annex 3). It is decided that these rules will be approved at the next WP4 meeting, if possible during the Spring meeting).
 - * Bo Rosborg proposed to create exchanges with young nuclear engineers and researchers from Europe and Asia. A few young researchers from a few Asian countries (or from a single country), apply for participation in a group visit to European nuclear facilities and research organizations, and vice versa for a few young researchers from European countries who may apply for participation in a group visit to Asian nuclear facilities and research organizations. He will try to start contacts in that way by the beginning of 2012.

4. EFC WP4 PUBLICATIONS

One EFC "green book" has been published since the last WP4 Fall meeting: EFC #59 ("Sulphur Assisted Corrosion in nuclear disposal systems", editors: B. Kursten, F. Druyts & D. Féron, published in August 2011, 192 pages, ISBN: 978 1 907975 17 2) and a special issue of Corrosion Engineering Science and Technology (Vol. 46, N°2, April 2011) which includes the proceedings of the 4th International Workshop on Long Term Prediction of Corrosion Damage in Nuclear Waste Systems (Guest editors: B. Kursten and F. Druyts, SCK-CEN, Belgium).

The proceedings of the "Ageing Management of Nuclear Structures and Installations", AMP 2010 Workshop held in November 2010, have been published in "The European Physical Journal" (Vol. 12, 2011).

One book is under preparation: a "green book" entitled "50 years of stress corrosion cracking of nickel based alloys", from the presentations made during the "Jubilee day" on January 26th, 2010.

5. EFC WP4 EVENTS

The year 2010 has been particularly rich in WP4 events as 4 have been already held:

- ✓ Jubilee day: Stress Corrosion Cracking of nickel base alloys at CEA - Coriou effect/50 ans de corrosion sous contrainte au CEA - Effet Coriou
26 January 2010 at the CEA/Saclay - 130 participants
- ✓ International workshop on "Coupling mechanisms to improve lifetime prediction of LWRs"
EFC Event 331, 08-09 April 2010, Les Renardières (France), EDF-MAI (Material Ageing Institute) - 50 participants
- ✓ 4th International Workshop on "Prediction of Long Term Corrosion Behaviour in Nuclear Waste Systems"
EFC Event 329, 28 June - 2 July 2010, Bruges, Belgium, SCK-CEN - 65 participants (Annex 4)
- ✓ International workshop "Ageing Management of Nuclear Structures and Installations"
EFC event 334 (with AECL and RILEM), 08-13 November 2010, Toronto, Canada - 96 participants

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Several events are planned for 2012 and 2013

- ✓ An International workshop "Stress corrosion cracking of weld metals in LWRs" EDF-MAI (France) is in preparation for September 2012 by Th. Couvant (Annex 6). This workshop may be in conflict with the previous one planned with PhDs and post-docs. No decision is taken.
- ✓ NUCPERF 2012, Long-Term Performance of Cementitious Barriers and Reinforced Concrete in Nuclear Power Plant and Radioactive Waste Storage and Disposal, 12-15 November 2012, in Cadarache (France), EFC event 351.
- ✓ 5th International Workshop on "Prediction of Long Term Corrosion Behaviour in Nuclear Waste Systems (LongTermCor2013)", 07-11 October 2013, in Asahikawa, Hokkaido, Japan, organised by Dr. Eng. A. Hidekazu (Application for an EFC event number - Annex 7).
- ✓ The Summer School on Nuclear Corrosion is discussed again. It appears that several events are already planned in 2012 and it seems difficult to add one more event; A. Legat will check what is possible to do.

6. EFC WP4 WEBSITE

The WP 4 website is described and shown (Annex 5). It is updated frequently thanks to S. Ritter. The audience is encouraged to pass by from time to time and/or feel free to send events or any other useful information to [S. Ritter](#).

The address is: http://www.efcweb.org/Working_Parties-p-104085/WP_4.html.

A restricted area (for members only) has been added to the WP 4 website. The password will be provided only to members.

D. Féron expressed his thanks to S. Ritter for taking care of the WP4 website.

7. EUROCORR_s

- ✓ EUROCORR'2012, 09-13 September, Istanbul (Turkey) where a Nuclear Corrosion session is planned and a workshop on Environmental sensitive fracture with the WPs 3 and 9
- ✓ EUROCORR'2013, 01-04 September, Lisbon (Portugal)
- ✓ EUROCORR'2014, 08-12 September, Pisa (Italy)

8. MISSING ITEMS, CONCLUSION AND CLOSURE

The next Fall Meeting of the EFC WP4 will be held in Istanbul (Turkey) during EUROCORR'2012.

It is planned to have a Spring Meeting (location to be defined).

The meeting is closed as no other point is raised.

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Enclosure 1:

- ✓ Annex 1 Agenda of the Stockholm meeting

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Fall meeting of the Nuclear Corrosion Working Party (EFC WP4)

Wednesday, 7 September 2011 (16h10-18h)

Stockholm International Fairs, Room 6
Stockholm, Sweden

(Information are given on the Eurocorr website <http://www.eurocorr.org/EUROCORN+2011.html>)

The proposed agenda is the following:

1. Opening of the meeting, apologies for absences and approval of the agenda
2. Approval of the minutes of the Moscow and Avignon 2011 fall meetings
3. EFC WP4 internal matters
 - Short presentation of the EFC WP4
 - The new 3 years plan
4. EFC WP4 Publications
 - Books & special issues already published
 - Future publications
5. EFC WP4 past events
6. EFC WP4 future events
7. EFC WP4 website
8. EUROCORR's
9. Missing items
10. Closure



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Enclosure 2:

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- ✓ Annex 2 Slides presented by D. Féron at the Stockholm meeting

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Enclosure 3:

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- ✓ Annex 3 Proposed rules for poster prize, oral prize and honorary medal of the WP4

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Enclosure 4:

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- ✓ Annex 4 Presentation made by Bruno Kursten

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Enclosure 5:

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- ✓ Annex 5 Presentation made by Stephan Ritter

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- ✓ Annex 6 Presentation made by Thierry Couvant

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Enclosure 7:

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- ✓ Annex 7 Slides related to the LongTermCor2013 (Japan)

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