

Minutes of the Business Meeting Working Party 3:
Corrosion by Hot Gases and Combustion Products (WP3)
07.09.2011 EUROCORN 2011 Stockholm, Sweden

1. Prof. Michael Schütze (DECHEMA) opens the meeting and welcomes the participants.
2. Prof. Schütze presented the three-year, working program of the WP3.
 - 2.1. WP3 meetings
 - business meetings will continue to take place annually in conjunction with EUROCORN (20-30 participants), business 100%
 - organisation of WP3 technical workshops every 2-3 years (60-100 participants), technical 100%
 - 2.2 Sessions organized at EUROCORN.
 - 2-day topical session at EUROCORN 2011
 - 1- or 2-day WP3 topical session planned for EUROCORNs 2012-2014 depending on the input of authors
 - 2.3. Cooperation with other WPs e.g. Joint Sessions at EUROCORN 2011.
 - Workshop on “High Temperature Corrosion in Refinery and Process Industries” together with EFC-WP15
 - Workshop on “High Temperature Coatings” together with EFC-WP14
 2. 4. Information about EFC, working parties, events, courses etc. is published on its webpage **www. efcweb.org**. Information is kept up-to-date.
 2. 5. Contributions to the EFC Newsletter are delivered on request.
 - 2.6. Organisation of EFC Workshops/Courses/Meetings.

Several EFC-WP3 workshops organised in the past.
The date for the next workshop has been changed to 19th-21st September 2012.
Topic: “Beyond single oxidants”, location is DECHEMA House in Frankfurt/Main, Germany.
The call for papers is currently being distributed.
 - 2.7. The results of a joint collaborative research and testing program were published in the EFC series book No. 53.
 - 2.8. Participation in EU research programs. Success rate < 10%.
 - Projects formulated in the working party:
 - PARTICOAT – successful. Started 2008
 - RFS-PR-06093 Advanced materials or oxyfuel combustion of coal. Not retained for financial support
 - CP-FP 214302-1 - Nanoscale surface modification to suppress environmental embrittlement of titanium aluminide alloys. Failed to pass one threshold in the first evaluation round
 - CP-IP 213541-1 - Tailored materials to resist in severe environments
Successful in the first round, failed in the second evaluation round
 - New proposal planned in the frame of the European Marie Curie Network Programme INSTAP – Innovative steel grades for exhaust applications, successful. Started 2009.

- OxyCorr – boiler corrosion under oxy-fuel conditions, successful. Started 2009.

2.7. Development of standards for high temperature corrosion testing.

The following documents are currently undergoing different ISO voting stages. These are expected to become standards in 2012 or 2013.

- ISO / DIS 21608 - oxidation testing under isothermal conditions.
- ISO / DIS 26146 - thermocyclic testing.
- ISO / DIS 13573 - post experimental investigation after the corrosion test.

Currently in preparation are:

- ISO / NP 17248 - Test method for high-temperature corrosion testing of metallic materials by fully or partially embedding in salt, ash, or other inorganic solids.
- ISO / NP 17245 - Test method for high-temperature corrosion testing of metallic materials by immersing in molten salt or other inorganic liquids.
- ISO / NP 17224 Test methods for high-temperature corrosion testing of metallic materials by coating with salt, ash, or other inorganic solids.

The group of Daniel Monceau works on standard of

- TGA
- car industry – exhausting gases

Other ISO Activities include:

- Coordination initiated with TC 107 (Metallic and other inorganic coatings), November 2010.
- ISO/DIS 13123: Metallic and other inorganic coatings - Test method of cyclic heating for thermal-barrier coatings under temperature gradients.
- ISO/DIS 14188 - Testing method of thermal barrier coatings under cyclic uniform heating and heating-quenching environment.

2.8. List of high temperature corrosion events.

A list of conferences in the field of high temperature corrosion is given in the attachment.

2.9. Preparation of publications for the EFC series of books.

- *EFC 41*: Corrosion by carbon and nitrogen - Metal dusting, carburisation and nitridation, edited by M. Schuetze, H. Grabke - published
- *EFC 47*: Novel approaches to improving high temperature corrosion resistance, edited by: M. Schütze and W. Quadackers - published
- *EFC 52*: Progress in Corrosion - The First 50 Years of the EFC, edited by Paul McIntyre & J Vogelsang. WP3 contribution in the book. - published
- *EFC 53*: Standardisation of thermal cycling exposure testing, edited by M Schütze and M Malessa – published.
- *EFC 57*: Protective Systems for High Temperature Applications: From Theory to Industrial Implementation, edited by: M. Schütze and W. Quadackers – published.

10. New funding possibilities exists in EU-framework 7, theme 4:

Call Title: Theme 4 – NMP – Nanosciences, Nanotechnologies, Materials and new Production Technologies – SMALL 2012

Call identifier: FP7-NMP-2012-SMALL-6

Date of publication: 20 July 211

Deadline: first stage: 8 November 2011 at 17.00.00 (Brussels local time)

Indcative budget: EUR 124 million. The final budget of the call may vary by up to 10% of the total value of the indicated budget for the call.

Frankfurt/Main, Germany 12.10.2011

Dr. K. Aleksandrov

Attachment

List of events related to corrosion & high temperature materials

Title, Date, Location	URL
18 th International Corrosion Congress (ICC) 20-24 November 2011, Perth, Australia	www.18iccp Perth2011.com
2. Dresdner Werkstoffsymposium Dresden, 8.-9. Dezember 2011	http://www.werkstoffsymposium-dresden.de/
4 th EUCOMAS 7-8 February 2012, Hamburg, Germany	http://www.vdi-wissensforum.de/index.php?id=147&tx_vdiep_pi1%5Bevent_nr%5D=01TA901012
NACE Corrosion 2012 Salt Lake City, UT, USA March 11-15, 2012	http://events.nace.org/conferences/c2012/callforpapers.asp
TMS Annual Meeting 11-15 March 2012, Orlando, USA	www.tms.org
MRS 2012 Spring Meeting 9-13 April 2012, San Francisco; USA	http://www.mrs.org/spring2012/
39 th ICMCTF International Conference on Metallurgical Coatings and Thin Films 23-27 April 2012, San Diego, USA	http://www2.avs.org/conferences/icmctf/
221 st ECS-Meeting 6-11 May 2012, Seattle, USA	http://www.electrochem.org/meetings/biannual/fut_mtgs.htm
E-MRS 2012 SPRING MEETING 14-18 May 2012, Strasbourg, France	http://www.emrs-strasbourg.com
8 th International Symposium on High-Temperature Corrosion and Protection of Materials (HTCPM) 20-25 May 2012, Les Embiez, France	www.htcpm2012.com
Gamma (TiAl) Alloy Technology 2012 28 May - June 1 2012, Beijing, China	planned
Achema 2012 18-22 June 2012, Frankfurt, Germany	www.chema.de
Junior Euromat 23-27 July 2012, Lausanne, Swiss	http://www.dgm.de/dgm/junior-euromat/
14 th IUPAC Conference on High Temperature Materials Chemistry 9-12 September 2012, Beijing, China	http://htmc14.ustb.edu.cn
Superalloys 2012: The 12th International	http://www.tms.org/meetings/specialt

Symposium on Superalloys September 9-13, 2012, Seven Springs, USA	y/superalloys2012/home.aspx
Eurocorr 2012 10-13 September 2012, Istanbul, Turkey	www.eurocorr.org
MSE Materials Science and Engineering 25-27 September 2012, Darmstadt, Germany	http://www.dgm.de/dgm/mse-congress/
EFC Workshop 19-21 September 2012, Frankfurt, Germany	http://events.dechema.de/efcws12.html
Materials Science & Technology MS&T 2012 7-11 October 2012, Pittsburgh, USA	http://www.matscitech.org/about/future-meetings/
222 st ECS-Meeting 1-12 October 2012. Honolulu, USA	http://www.electrochem.org/meetings/biannual/fut_mtgs.htm
MRS Fall Meeting November 26 - 30, 2012, Boston, Massachusetts	http://www.mrs.org/fall2012/
