

# EFC Working Party 3:

Corrosion by Hot Gases and Combustion Products

Business Meeting at EUROCORR 2007 in Freiburg

on 11 September 2007      Beginning: 16:35 h

Location:    Room K2-4

## AGENDA

1. Opening and welcome
2. Three-year work programme of the Working Party
3. High temperature corrosion events in 2007 and later
4. Joint European research activities
  - EuMaT
  - Others
5. Potential EFC Workshops
6. Standardization activities
  - CEN
  - ISO
7. Further items to be raised by the WP members  
(Please send short information to [schuetze@dechema.de](mailto:schuetze@dechema.de) before the meeting.)
8. Any other business

End of the meeting: around 18:00 h

**EFC WP WORK PROGRAMME PROFORMA (SEPTEMBER 2007 - AUGUST 2008)**  
**Working Party No. and Title: 3. Corrosion by Hot Gases and Combustion Products**

<b>MAIN OBJECTIVES FOR THE NEXT THREE YEARS</b>		
<b>To develop tools for a more precise assessment of high temperature corrosion resistance and for life-time prediction of materials and components under high temperature corrosion conditions</b>		
<b>DETAILED MEASURES BY WHICH THE ABOVE OBJECTIVES WILL BE ACHIEVED</b> (Please complete, as appropriate, using continuation pages if necessary)		
<b>No.</b>	<b>Type of Activity</b>	<b>Target Date(s)</b>
1	<u>WP Meetings</u> (state expected attendance levels & business/technical split) Different types of meetings a) WP business meeting in combination with each future EUROCORR (20-30) b) WP workshops (60-100)	annually every 2-3 years
2	<u>Sessions at EUROCORR</u> (identify special topics): 1 day topical session at EUROCORR 2007 2 day workshop "High Temperature Corrosion in the Chemical, Refinery and Petrochemical Industries" at EUROCORR 2007 together with WP15 No session planned at EUROCORR 2008 in Edinburgh as "Microscopy of Oxidation" will take place in Chester/UK immediately after EUROCORR 2008	<b>2007</b>
3	<u>Cooperation with other WPs e.g. Joint Sessions at EUROCORR</u> (give details): See item 2	
4	<u>Maintenance of a WP page on the new www.EFCWEB.org website:</u> Contribution to WP page has been installed and is being kept up-to-date.	
5	<u>Contributions to the EFC Newsletter:</u> Can be offered on request.	

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<b>No.</b>	<b>Type of Activity</b>	<b>Target Date(s)</b>
6	<u>Organisation of EFC Workshops/Courses/Meetings, etc</u> (give details): Several workshops have been organised in the past (see also item 10). Next workshop planned for 2009.	2009
7	<u>Organisation of Collaborative Research or Testing Programmes</u> (give details) See item 8 and EFC no. 53.	
8	<u>Participation in EU-supported Projects</u> (give details) In the 7th Framework Programme of the EU the following proposals were submitted: 1) RFS-PR-06093 <i>Advanced materials for oxyfuel combustion of coal</i> Not retained for financial support 2) CP-FP 214302-1 <i>Nanoscale surface modification to suppress environmental embrittlement of titanium aluminide alloys</i> Failed to pass one threshold in the first round 3) CP-IP 211329-1 <i>New multipurpose coating systems based on novel particle technology for extreme environments at high temperature</i> Successful in the first round, now going into the second evaluation round 4) CP-IP 213541-1 <i>Tailored materials to resist in severe environments</i> Successful in the first round, now going into the second evaluation round	



# High Temperature Corrosion – List of Events 2007

- Novel Applications of Surface Modification (NASM) 2007  
18-20 September 2007, Southampton, UK [www.iop.org/Conferences](http://www.iop.org/Conferences)
- Corrosion and Material Protection (EFC Event No. 294)  
1-4 October 2007, Prague, Czech Rep. [www.corrosion-conference.org](http://www.corrosion-conference.org)
- Titanium 2007 (23<sup>rd</sup> Annual Conference & Exhibition of the International Titanium Association)  
7-9 October 2007, Orlando, USA [www.titanium.org](http://www.titanium.org)
- Protective Coatings Conference: Protecting the Substrate and the Environment  
24-25 October 2007, Amsterdam, Netherlands [www.pra-world.com/conferences](http://www.pra-world.com/conferences)
- Stainless Steel World Conference & Exhibition  
6-8 November 2007, Maastricht, Netherlands [www.stainless-steel-world.net](http://www.stainless-steel-world.net)
- The 6<sup>th</sup> Libyancorr 2007 Conference and Exhibition  
12-14 November 2007, Tripoli, Libya [www.libyancorr.net](http://www.libyancorr.net)
- DGM Fortbildungsseminar Hochtemperaturkorrosion  
13-15 November 2007, Jülich, Germany [www.dgm.de](http://www.dgm.de)
- 13<sup>th</sup> Symposium “New Achievements in Corrosion Research and Engineering” (EFC Event No. 306)  
21-23 November 2007, Smardzewice, Poland [www.symp-kor-apcs.mim.pcz.czest.pl](http://www.symp-kor-apcs.mim.pcz.czest.pl)
- Corrosion Training Programme (Course)  
26-30 November 2007, Cranfield, UK [www.cranfield.ac.uk/short](http://www.cranfield.ac.uk/short)
- 2007 Tri-Service Corrosion Conference: “Integrating Corrosion Prevention and Control in Policy, Planning, and Programming”  
3-7 December 2007, Denver, USA [www.nace.org/triservice](http://www.nace.org/triservice)

# High Temperature Corrosion – List of Events 2008

12 <sup>th</sup> Middle East Corrosion Conference & Exhibition 3-6 February 2008, Manama, Bahrain	<a href="http://www.mecconline.org">www.mecconline.org</a>
TMS2008: 137 <sup>th</sup> Annual Meeting & Exhibition 9-13 March 2008, New Orleans, USA	<a href="http://www.tms.org/annualmeeting.html">www.tms.org/annualmeeting.html</a>
NACE Corrosion 2008 Conference & Expo 16-20 March 2008, New Orleans, USA	<a href="http://www.nace.org">www.nace.org</a>
35 <sup>th</sup> International Conference on Metallurgical Coatings and Thin Films 28 April – 2 May 2008, San Diego, USA	<a href="http://www2.avs.org/conferences/icmctf">www2.avs.org/conferences/icmctf</a>
7 <sup>th</sup> International Symposium High Temperature Corrosion and Protection of Materials 18-23 May 2008, Les Embiez, France	<a href="http://www.htcpm-2008.uhp-nancy.fr">www.htcpm-2008.uhp-nancy.fr</a>
1 <sup>st</sup> European Conference on Materials and Structures in Aerospace (EUCOMAS) 26-27 May 2008, Berlin, Germany	<a href="http://www.eucomas.eu">www.eucomas.eu</a>
EUROCORR 2008: Managing Corrosion for Sustainability 7-11 September 2008, Edinburgh, UK	<a href="http://www.eurocorr.org">www.eurocorr.org</a>
7 <sup>th</sup> International Conference on Microscopy of Oxidation 15-17 September 2008, Chester, UK	<a href="http://www.liv.ac.uk/engdept/conferences/moo_07.htm">www.liv.ac.uk/engdept/conferences/moo_07.htm</a>
EUROCORR 2009 6-10 September 2009, Nice, France	<a href="http://www.eurocorr.org">www.eurocorr.org</a>
EUROCORR 2010 13-17 September 2010, Moscow, Russia	<a href="http://www.eurocorr.org">www.eurocorr.org</a>

# Status of Corrosion-Related Projects Submitted for Support under the EC's 7<sup>th</sup> Framework Programme (24 July 2007)

## 1) RFS-PR-06093

*Advanced materials for oxyfuel combustion of coal*

Not retained for financial support

## 2) CP-FP 214302-1

*Nanoscale surface modification to suppress environmental embrittlement of titanium aluminide alloys*

Failed to pass one threshold in the first round

## 3) CP-IP 211329-1

*New multipurpose coating systems based on novel particle technology for extreme environments at high temperature*

Successful in the first round, now going into the second evaluation round

## 4) CP-IP 213541-1

*Tailored materials to resist in severe environments*

Successful in the first round, now going into the second evaluation round

# Draft Documents Presently Under Work

- **ISO/TC 156 CD 21608**  
Corrosion of Metals and Alloys – Test Method for isothermal exposure testing under high temperature corrosion conditions for metallic materials
- **ISO/TC 156 NWI 5092005**  
Corrosion of metals and alloys – Method for metallographic examination of samples after exposure to high temperature corrosive environments
- **ISO/TC 156 NWI XXXX (new document)**  
Corrosion of metals and alloys – Test method for thermal cycling exposure testing under high temperature corrosion conditions for metallic materials





# Status of the standardisation activities in the area of High Temperature Corrosion

## ISO TC 156 WG 13

**Convenor:** Prof. M. Schütze (D)  
**Secretary:** Dr. S. Osgerby (UK)  
**Members:** Prof. V. Cihal (CZ)  
G. Engström (S)  
Dr. S. Ito (JP)  
Dr. Y. Kawahara (JP)  
Dr. M. Malessa (D)  
Prof. T. Maruyama (JP)  
Dr. P. McIntyre (UK)  
Prof. F. Perez-Trujillo (E)  
Dr. R. Pettersson (S)  
Dr. S. Taniguchi (JP)  
Dr. P. Tortorelli (USA)  
Dr. Ian Wright (USA)



Materials  
Chemical Engineering  
Biotechnology