

<b>EFC Working Party 3</b>	
Combustion by Hot Gases and Combustion Products	
<b>Minutes of the business meeting at EUROCORR 2004</b>	
Nice on 13 <sup>th</sup> September 2004	
<b>Number of pages</b>	<b>5 (+4 pages annexes)</b>
<b>Annexes</b>	<p style="text-align: center;"><b>A: EFC WP Work Programme Proforma (September 2003 – August 2006)</b></p> <p style="text-align: center;"><b>B: High temperature corrosion calendar</b></p>

**Participants:**

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**AGENDA:**

1. Opening and welcome
2. Three-year work programme of the Working Party
3. High temperature corrosion events in 2004 and later
4. Joint European research activities:
  - COTEST
  - SUNASPO
  - Others
5. EFC-Workshop "Novel Approaches to the Improvement of High Temperature Corrosion Resistance" in Frankfurt/M. on 27 – 29 October 2004

6. Standardization activities- CEN- ISO

7. FRAMEWORK VI/VII

- Inclusion of HTC research
- Competence centres
- Other aspects

8. Further items to be raised by the WP members

9. AOB

## **1. Opening and welcome**

The meeting starts at 5.50 pm. Michael Schütze welcomes the participants to the meeting.

## **2. Three-year work programme of the Working Party**

- M. Schütze presents the work programme for the Working Party 3 for the time of September 2004 to August 2007. The complete working programme is given in the annex A.
- An overview about the WP meetings is given which covers the annual WP business meeting as well as the cooperation with WP15 Corrosion in the Refinery Industry, as for the organisation of a joint workshop during Eurocorr 2004. The workshop has already shown its success with an average of 45 attendees during the first two sessions.
  - For further ideas of cooperation with other WPs, one should contact M. Schütze.
  - The Working party web page has been updated.
  - On December 17<sup>th</sup> and 18<sup>th</sup> 2003, Dechema hosted a small workshop on Diffusion in Materials. 25 researchers from all over Europe took part in the intensive discussions. A report of this event has been sent to Dr. McIntyre as a contribution to the EFC- Newsletter.
  - An EFC- Workshop entitled "Novel Approaches to the Improvement of High Temperature Corrosion Resistance", EFC-Event No. 275 (contact: M. Schütze) will take place in Frankfurt/Main (Germany) October 27-29, 2004. This workshop will include contributions from 5 large European research programmes which come close to an end by the end of the year. These projects are: COTEST, OPTICORR, SMILER, SUNASPO and SUPERCOAT. Among the 58 papers registered so far, a significant number come from overseas, as for instance from USA, Australia, Japan or China.
  - Further ideas for the organisation of other EFC events every year or every two years should be communicated to M. Schütze.
  - EUROCORR 2005 will take place on 4-8 September 2005 in Lisbon, Portugal. It will be the 50<sup>th</sup> anniversary of EFC. Therefore each WP is expected to prepare a plenary lecture on the history of their field. Furthermore, it is decided in the present meeting to organise a 1 or 2 days session with the focus on the

high temperature corrosion aspects in energy conversion systems. This subject is accepted by all the attendees as it would certainly include some historical aspects. The call for papers will be included in the general call for papers for EUROCORR 2005.

- The Organisation of Collaborative Research or Testing Programmes mainly relies on the project “Cyclic oxidation testing – development of a code of practice for the characterisation of high temperature materials performance (COTEST)” funded in the frame of the European Commission programme GROWTH in the Generic Activity “Measurement and Testing”. This project started in January 2002. It is based on a workshop of WP3 in 1999 and EFC-publication No. 27. The project has 23 partners from 11 EU countries and pre-accession states. A larger working group behind this project (Cyclic Oxidation Group) consists of 42 colleagues from industry and academia with participation also from the US and Japan. It aims at converting the results of COTEST into an ISO standard for cyclic oxidation testing. The first draft of the ISO standard should be ready during the year 2005.
- The second joint research project is the “European Network for Super High Efficiency Power Generation (SUNASPO)” funded by the European Commission in their Research Training Networks programme. The project started in January 2002 and will run for 4 years. In the frame of this project young researchers from European countries are trained on high temperature corrosion research in 8 European Key laboratories. One presentation was given by one of the young researchers at Eurocorr 2004.
- The papers of the EFC-Workshop “Metal Dusting, Carburisation and Nitridation”, Event No. 258 held in Frankfurt/M. on 30<sup>th</sup>/31<sup>st</sup> January 2003 have finally been published after 2 years in the EFC book series. The attendees point out that 2 years is too long for publication. The corresponding papers for the workshop “Novel Approaches to the Improvement of High Temperature Corrosion Resistance”, EFC-Event No. 275 will also be published in the EFC book series. Finally, it is decided to publish the papers of the Eurocorr 2004 , Workshop “ Corrosion by hot gases and combustion products with emphasis on high-temperature corrosion in the chemical and petrochemical industries”. The papers will be collected by M. Schütze and published either as an EFC Book or in a Scientific Journal if the number does not exceed 8 papers. Each author will receive a letter from M. Schütze in the following weeks. It is decided to fix the dead line for the manuscript to be sent to M. Schütze by the end of November 2004.
- No additional comments were made to this item.

### **3. High temperature corrosion events in 2004 and later**

- A calendar showing events relevant to high temperature corrosion was presented. This calendar is given in annex B.
- The deadline for abstract submission for EUROCORR 2005 is 15<sup>th</sup> November 2004.

- The workshop “Novel Approaches to the Improvement of High Temperature Corrosion Resistance”, EFC-Event No. 275 taking place in Frankfurt/Main on October 27-29, 2004 is still open for registration under [www.dechema.de/efcws04](http://www.dechema.de/efcws04).

#### 4. Joint European research activities

The projects COTEST and SUNASPO which were mentioned before were described by M. Schütze in more detail. The project work plans were presented. SUNASPO has been presented as oral lectures during the EUROCORR 2004 conference.

#### 5. EFC-Workshop “Novel Approaches to the Improvement of High Temperature Corrosion Resistance” in Frankfurt/M. on 27 – 29 October 2004

This workshop has already been mentioned. The purposes of the workshop are presented in detail by M. Schütze.

#### 6. Standardization activities

This point has already been mentioned. M. Schütze presents in detail the status of the standardisation activities of high temperature corrosion. The result of these activities will lead to an ISO standard working document of **ISO TC 156 WG 13**.

The standardisation activity concentrates on 5 items: continuous isothermal exposure testing, discontinuous isothermal exposure testing, cyclic oxidation testing, general guidelines for post-exposure examination, thermo gravimetric testing. The first 3 tasks are well advanced the fourth is in preparation and the last one has not yet started. It is pointed out that for thermogravimetric testing being rather a research technique, there is not such a strong need for its standardisation compared to the other techniques.

#### 7. Framework VI/VII

M. Spiegel gives a short presentation on the instruments defined by the European commission for funding research under Framework VI.

4 main instruments were defined:

- Specific target research projects (STREP): industrial partnership is not compulsory but the industrial interest has to be demonstrated. Results should be implemented to industry after 5 years.
- Integrated Projects (IP): should be coordinated by industry. Share of academic and industrial partners should be equal.
- Networks of Excellence (NoE): Network between academic partners. Highly academic subjects. Fixed rates for students, post-docs and travels.
- Marie Curie Actions (MCA) : Promoting Researchers Mobility. Thematically variable.

Moreover, a recent call for FP 6 with deadline on December 8, 2004 is entitled “Sustainable development global change and ecosystems” which includes sustainable energy systems. This call is identified by *FP 6 - 2004- Energy –3* and will lead to the funding of all type of projects : STREP, IP and NoE. M Spiegel points out

that the present group could build a project on the development of high temperature fuel cells for cost effective centralised/decentralised power generation systems. This could include basic materials and industrial process research on functional materials as an IP.

A second call identified by *FP 6-2004-TREN –3* with the same deadline could also include some high temperature corrosion research on the cost effective supply of renewable energies including:

- Innovative combinations of biomass with fossil fuels as an IP
- Innovative demonstrations of improvements to energy recovery and renewable electricity production using waste (..) and other biomass (..) feedstocks as an IP
- Innovative combinations of biomass and wastes with fossil fuels as a STREP

The evaluation of the proposals is a one step procedure. A full proposal has thus to be submitted by the deadline: December 8, 2004

## **8. Further items**

No further items had been added to the agenda.

## **9. AOB**

R. Kirchheiner from Schmitt und Clemens raises the point that the WP should use the EFC opportunity to show to the politicians that R&D programmes help solving problems and save money also in the high temperature corrosion business. He suggests to show the European commission how scientific programmes contribute to the advancement of technology. He underlines the fact that the WP should inform the politicians that the money which has been saved due to research activities amounts to millions of euros. Finally, he emphasises that the research funding for collaboration between industry and academia should be made easier in the future frameworks. A reduction of the bureaucratic tasks is needed. R. Kirchheiner thinks that the current procedures drive the industry into funding R&D only on an internal basis and start reducing the collaborations.

It is decided that M. Schütze will collect some ideas and figures in order to prepare a letter for the president of the EFC who will forward it to the European Commission in Brüssels. Any ideas from the participants should be sent to M. Schütze.

## **10. Next Business Meeting**

The next business meeting will take place during Eurocorr 2005 in Lisbon.

The meeting ends at 7 pm.

Valentin ROHR