

Minutes of the meeting of ISO TC 156 WG 13 DECHEMA, Frankfurt 25th October 2004

Agenda

1. Welcome and introduction by the convenor
2. Short discussion about any changes of the international situation on standardization of high temperature corrosion testing
3. Work items of WG 13 (reporting and discussion)
 - 3.1 Thermo gravimetric testing (not active)
 - 3.2 Continuous and discontinuous isothermal oxidation testing
Completion of working document no. ISO/TC 156 N 1122 (current version 18 May 2003) "Test method for continuous isothermal exposure testing at elevated temperatures for metallic materials"
 - 3.3 General guidelines for post-exposure examination
Discussion of the draft for an ISO document prepared by Steve Osgerby
 - 3.4 Cyclic oxidation testing
Report by Michael Schütze on the status of the European COTEST Initiative
4. Resolutions on the next steps
5. AOB
6. Date and place of next meeting

Minutes

The meeting started at 9:25 a.m.

1. Welcome and introduction

Michael Schütze welcomed all participants of the meeting and announced that the next meeting will take place in May 2005 (week 20). Copies of the resolutions of the meeting in May 2004 in Stockholm have been circulated. The discussion on Peter Tortorelli's question if cooling every 500 h is regarded as cyclic oxidation was postponed to a later stage of the agenda.

2. Changes of the international situation on standardisation of high temperature corrosion testing

Toshio Maruyama mentioned that several new JIS documents about "*General rules for high-temperature corrosion test of metallic materials*", "*Method of dipping and embedding test in molten salt for metallic materials*", "*Method of electrochemical corrosion test for metallic materials in molten salts*", "*Method for steam oxidation testing of boiler tube metallic materials*", "*Method for high-temperature corrosion test of metallic materials by salt coating*" and "*Method for high-temperature gaseous corrosion test of metallic materials*" are in preparation. Toshio Maruyama will send the electronic files to DECHEMA for distribution among the members of the working group.

Steve Osgerby mentioned that NPL uses a good practice guide for steam oxidation tests. He will distribute the file among the members of the working group.

It was agreed to have Steam Oxidation as a new work item in ISO TC156 WG13.

3. Work items of WG 13

- 3.1 Thermo gravimetric testing is not active and was not discussed.
- 3.2 The discussion and amendment of the working document ISO/TC 156 N1122 was continued. In the scope it was explicitly stated by a supplementary phrase that thermal cycling oxidation is not included in this standard. A section with normative references following the section "Scope" was introduced. The references will be collected by Steve Osgerby and distri-

buted to the members. Steve Osgerby will update the section normative references. It was agreed that Maik Malessa will insert figures to illustrate the designations used for mass determination. The updated working document is attached. All WG members are requested to read the working document carefully and propose corrections and amendments where necessary.

3.3 The discussion on the draft for post exposure examination prepared by Steve Osgerby was started. Modifications to the document will be made by Steve Osgerby. The following modifications were suggested:

- symbols and definitions in *3-Terms and definitions*
- to combine items 7.1.2 and 7.1.5
- item 7.1.3 is basically applicable for tubes; a diagram should be used for illustration
- a reference for the Ni-plating mentioned in 7.1.2 is missing
- in 7.2 two figures: one with coating, one without coating; this should be combined with the section terms and definitions
- changing of the wording in 7.4.1 and 7.4.2
- a template sheet for the measured data

The discussion of the draft modified by Steve Osgerby will be continued at the next meeting.

3.4 The COTEST project will be finalised at the end of January 2005. The draft code of practice developed for thermal cycling oxidation testing is currently validated in tests at different laboratories. After final fine-tuning the draft code of practice can serve as a basis for a working document.

4. Resolutions on the next steps

It was agreed to proceed with the following steps:

- Final editing of N 1122
- Preparation of template tables for N1122
- Registration of the draft for post exposure examination as a working document

5. AOB

No other items were discussed.

6. Date and place of next meeting

The next meeting will be held in Bratislava, Slovakia during the next ISO TC 156 meeting from 17 to 19th May 2005. All members present preferred the 19th May 2005. An invitation with final details about the date will be sent in due time.

The meeting was closed at 5:30 p.m.

Table 1: Attendees at the meeting

Yuuzou Kawahara, Mitsubishi Heavy Industries Ltd.

Maik Malessa, Dechema e.V., Germany

Toshio Maruyama, Tokyo Institute of Technology, Japan

Steve Osgerby, National Physical Laboratory, UK

Francisco J. Perez-Trujillo, Universidad Complutense Madrid, Spain

Rachel Pettersson, SIMR, Sweden

Michael Schütze, Dechema e.V., Germany

Peter F. Tortorelli, Oak Ridge National Laboratory, United States of America

Frankfurt/Main, 23th November 2004

Maik Malessa