

Minutes of Management Committee Meeting

At Czech Technical University in Prague

18-19 April 2013

1. Welcome to the participants

The experts were welcomed by the Czech delegation.

2. Approval of the agenda

The Agenda was approved.

3. Approval of the Minutes of the MC meeting Zadar 2012,

The minutes of the Zadar meeting on 8-9 October 2012 were approved.

The Project Deliverable, the book of WP3 - Fire brigade reports and investigations, was distributed and discussed.

4. Current budget available – planned activity

The chairman of the Action presented the current year's budget breakdown, previously discussed and agreed during the MC meeting in Zadar. The total budget (7/2012-6/2013) is €126 087,00. A saving of €1 982 had been made on the budget for the Zadar meeting.

5. Preparation of next COST action

Two proposals had been received. Presentations covering these are discussed later in these minutes.

6. Projects under WP7 Educational dimension

Dubravka BJEGOVIĆ had made a proposal after reviewing current EU funding sources. This is covered later in these minutes.

7. Introductory remarks to Work Packages

Frantisek WALD introduced current and future stages, which include the Work Packages:

WP4 - Benchmark studies

These were the main subject of the Prague WG meetings.

WP6 - Topics for upgrades to Eurocodes

There was some discussion of national/EU projects for preparation of the next generation of Eurocodes at the end of meeting.

8. Plenary sessions on WP4 - Benchmark studies

The Experts presented and discussed their proposals for benchmark studies. These are listed below:

Leslaw KWASNIEWSKI, Principles of verification and validation

Leslaw KWASNIEWSKI with Jan PELCZYNSKI, Benchmark example problems for beams at elevated temperatures

Aldina SANTIAGO with Cecile HAREMZA, Fernanda LOPES, Jean-Marc FRANSSSEN, Numerical behaviour of steel columns under localized fire loading

Aldina SANTIAGO with Joao RIBEIRO, Constanca RIGUEIRO, Numerical behaviour of T-stub joint component at ambient and elevated temperatures

Bin ZHAO with Gisele BIHINA, Proposal for benchmark study - Full scale warehouse real fire test

Paulo VILA REAL with Martin PRACHAŘ, Nuno LOPES, Carlos COUTO, Michal JANDERA, Frantisek WALD, Benchmark study of lateral torsional-buckling of class 4 steel plate girders under fire conditions

Paulo VILA REAL with Martin PRACHAŘ, Nuno LOPES, Carlos COUTO, Michal JANDERA, Frantisek WALD, Experimental and numerical comparison and Benchmark study of local-buckling of class 4 steel plate girders under fire conditions:

Meri CVETKOVSKA with Ljupcho LAZAROV, Koce TODOROV, Numerical and experimental analysis of RC beams exposed to different fire exposure

Meri CVETKOVSKA with Ljupcho LAZAROV, Milica JOVANOSKA, Numerical and experimental analysis of RC columns exposed to fire

Robert PEČENKO with Tomaz HOZJAN, Ian BURGESS, Benchmark studies for steel beams, steel frames and composite steel beams

Giuseppe IAZZETTA with Iolanda DEL PRETE, Beatrice FAGGIANO, Jean-Marc FRANSSSEN, Federico MAZZOLANI, Emidio NIGRO, The behaviour of moment resisting steel frames subjected to standard fire after earthquake, using SAFIR code

Luís LAÍM with Hélder CRAVEIRO, Joao Paulo RODRIGUES, Baseline study on the structural behaviour of cold-formed steel elements subjected to fire

Markku HEINISUO with Mikko PARTANEN, Car fires with sprinklers: A study on the Eurocode for sprinklers

Emidio NIGRO with Giuseppe CEFARELLI, D. SANNINO, A. FERRARO, Thermo-mechanical analysis of steel columns using different finite element types and constitutive laws

Iolanda DEL PRETE with Emidio NIGRO, Giuseppe CEFARELLI, D. SANNINO, A. FERRARO, The influence of joint modeling on fire behaviour of steel frame structure

Antonio BILLOTA with Emidio NIGRO, Giuseppe CEFARELLI, D. SANNINO, Iolanda DEL PRETE, Beatrice FAGGIANO, Federico MAZZOLANI, Software covering steel frame structural behaviour

Csaba SZILAGYI, The comparison of the results of a full scale evacuation test to the calculation method of Hungarian regulations and to the Pathfinder software

Eva CALDOVÁ with Magdaléna DUFKOVÁ, Charring rates of timber: Experimental and numerical comparison of fire protected and unprotected timber

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9. Plenary sessions on WP4 - Benchmark studies

The Invited Experts Bart MERCI, Venkatesh KODUR, and TAN Kang Hai presented and discussed selected questions relevant to benchmarking.

Ian BURGESS proposed that benchmark studies be recorded in two levels; simple and advanced. They should be recorded by means of:

- A brief descriptive report (or paper) of up to 12 pages, qualitatively defining the nature of the example. The Template and Check list is on the Action website <http://fire.fsv.cvut.cz/ifer/WP4>.
- An Excel workbook to define quantitatively all relevant input data needed to reproduce the model.
- Sufficient output data, both numerical and graphical, for comparison with new modelling. This should also be contained within an Excel workbook.

The members of the Action were asked to prepare the text documents and Excel workbooks for their Benchmark studies for the Aveiro Action meeting, 18.-19 October 2013.

10. Training school

The Chairman thanked Ian Burgess, Kamila Horová and Beatrice Faggiano for preparation of the Training School, and for the selection of 30 trainees, as agreed at the Zagreb MC meeting, by means of local nomination and Core Group agreement. The list of nominated trainees and the course Programme is at fire.fsv.cvut.cz/ifer/2013-Training_school

11. Short term scientific missions (STSM)

The Chairman informed the meeting that ten STSMs had been proposed and accepted for 2012- 2013, on the basis of the Zagreb MC meeting decision, with Core Group agreement. All had been completed, and would accelerate the work on Benchmark Studies. The details are shown below:

Ioan Both	Polytechnic University of Timisoara	RO	Benchmarks for thermal and mechanical response of structures subjected to fire actions	L. Kwasniewski (PL)	2/3 - 30/3
Carlos Couto	University of Aveiro	PT	Verification and Numerical Validation of Benchmark Studies	B. Zhao (FR)	14/1 - 15/2
Gisele Bihina	CTICM	FR	Benchmark studies	F. Wald (CZ)	18/4 - 24/4
Neno Toric	University of Split	HR	Numerical modelling of steel structures exposed to fire	I. Burgess (UK)	11/2 - 25/2
Robert Pecenko	University of Ljubljana	SI	Benchmark studies	I. Burgess (UK)	7/1 - 18/1

Martin Prachar	Czech Technical University in Prague	CZ	Lateral Torsional Buckling of Beams of Class 4 Cross-Section at Elevated Temperature	P. Vila Real (PT)	12/3 - 2/4
Jan Hricak	Czech Technical University in Prague	CZ	Local Buckling of Beams of Class 4 Cross-Section at Elevated Temperature	F. Morente Belmez (SP)	5/4 - 27/4
Sebastien Durif	Blaise Pascal University	FR	Design developments for cellular beams in fire conditions	I. Burgess (UK)	6/4 - 20/4
Maja Ban	University of Split	HR	People flow and evacuation	S. Sharma (UK)	4/3 - 15/3
Monika Hajpal	Xxxx Ltd.	HU	Fire performance of limestone and concrete	R. Borg (MT)	10/2 - 16/2

12. AOB

a) Preparation of next COST action

Preparation of a future COST Action within the TUD domain, for application in September 2013, was discussed. Two possible proposal subjects were presented, with the working titles:

- **Robustness assessment of urban settlements in fire after disasters**

Beatrice FAGGIANO will lead this application. Subjects proposed are; Fire after blast, storm, flood, earthquakes, impact and collision. Different scales of construction, district and regional approaches, vulnerability, management, medicine, mitigation, robustness-based design. Context of infrastructure and buildings.

- **Smoke in fire in infrastructure and buildings**

Szilagyi CSABA will lead this application. The proposal will be sent by email.

b) WP6: Thoughts on Eurocode upgrading

The publication is expected to be prepared by all members, based on two themes:

- **Procedures for application of Fire design under national rules**

Cooperation is needed between the authorities in different European countries. A preliminary questionnaire to establish the current information for each country will be prepared by Jyri OUTINEN.

- **Proposals for improvements based on local/European projects**

These will help to introduce the latest research into standards.

c) The educational dimension

Dubravka BJEGOVIC proposed that members of TU0904 should prepare an EU educational proposal related to fire safety. The proposed network should be developed for CEEPUS (Central European Exchange Program for University Studies; see <http://www.ceepus.info/default.aspx>). The draft proposal, acronym FRENED, is an annex to these Minutes.

13. Activities up to the end of the Action

The agenda of activities up to the end of the Action is as follows:

- **20-21 Feb 2014 Krakow** Meeting WP6, WP7, Evaluation of Action
- **18-19 Oct 2013 Aveiro** Meeting WP4, WP6, WP7
- **3-4 Jul 2013 Rijeka** TUD Annual Progress Conference
- **6-9 Jun 2013 Naples** Training school
- **6 Jun 2013 Naples** WP4 meeting

14. Closure of the meeting

The meeting closed at 13.00.

František Wald and Ian Burgess

Prague 19 Apr 2013