

2nd International Workshop
on
Thermo-Mechanical Fatigue
(TMF-Workshop 2011)

May 12th - 13th, 2011
BAM Federal Institute for Materials
Research and Testing,
Berlin, Germany

Background

Components in the Aerospace, Power and Automotive engineering sectors are frequently subjected to cyclic stresses induced by thermal fluctuations and mechanical loads. For the design of such components reliable material property data are required which need to be acquired using well accepted and reproducible testing procedures.

The first TMF-Workshop was held at BAM in 2005 on the occasion of the development of a European Code of Practice for TMF testing. It brought together approx. 70 European and international experts.

The intention of the present event is to continue this exchange of knowledge. It provides a forum to present and discuss all recent developments in the field of thermo-mechanical fatigue.

Who should attend

The seminar is aimed at engineers, scientists and technical staff of research institutes and industry who have an interest in the numerous aspects of thermo-mechanical fatigue.

Topics

- TMF of steels, aluminium-, titanium-, nickel base and other alloys
- Cyclic stress strain behaviour at TMF
- TMF life
- Comparison of TMF and LCF life
- Crack initiation, crack growth measurement at TMF
- TMF and superimposed HCF
- TMF and creep interactions
- TMF and environmental interactions
- Multiaxial TMF
- TMF of coated materials
- TMF and thermal fatigue of components
- Service-cycle TMF testing
- TMF damage mechanisms
- Interpretation of TMF data
- TMF models
- TMF testing and standardisation
- Applications

Language

The Seminar language will be English.

Submission of Abstracts

Attendees who wish to give an oral or poster presentation are invited to submit a one-page abstract (A4) containing title, list of authors and the outline of the intended contribution until January 31st, 2011. One figure may be included. Authors will be notified of abstract acceptance until February 28th, 2011. A book of abstracts will be available during the workshop.

Publication

It is intended to publish the proceedings of the Workshop in a reviewed journal. The full papers will be due at the conference. Instructions for paper preparation will be published on the Workshop-website on time.

Workshop fee

The registration fee will be 250 € and should be remitted upon receipt of the registration confirmation and invoice. It includes refreshments, buffet dinner, copies of book of abstracts and conference proceedings.

Registration

The pre-registration starts on January 1st, 2010. Please visit the website of the Workshop <http://www.tmf-workshop.bam.de> to find the registration forms.

Workshop Committee

H. Klingelhöffer, BAM, Berlin, D (Chairman)
E. Affeldt, MTU Aero Engines, Munich, D
T. Beck, FZ Jülich, D
P. Hähner, DG-JRC, Petten, NL
S. Holdsworth, EMPA, Dübendorf, CH
J. Olbricht, BAM, Berlin, D
L. Remy, ENSMP, Evry, F

Important dates and deadlines

- Pre-registration starts Jan. 1st, 2010
- Submission of abstracts Jan. 31st, 2011
- Notification of authors Feb. 28th, 2011
- Workshop registration March 31st, 2011
- Full papers May 12th, 2011

Previous Meetings

organised by The High Temperature Mechanical Testing Committee (HTMTC), ESIS TC11:

- **Techniques for High Temperature Fatigue**, UKAEA, Springfields, UK, 1983
- **Measurement of Crack Growth at HT**, Rolls Royce, Derby, UK, 1984
- **Multi-Axial Creep Testing**, CERL / ERA, Leatherhead, UK, 1985
- **Mechanical Testing at Temperatures Above 1000°C**, NEI (IRD), Newcastle upon Tyne, 1986
- **Fretting Fatigue and Wear**, GEC, Rugby, 1988
- **Mechanical Testing of Engineering Ceramics at High Temperatures**, NPL, London, UK, 1988
- **Temperature Measurement and Control in High Temperature Mechanical Testing**, INCO, Hereford, UK, 1989
- **Harmonisation of Testing Practice for High Temperature Materials**, Ispra, Italy, 1990
- **Ultra High Temperature Mechanical Testing**, JRC Petten, NL, 1992
- **The Practicalities of Thermo-Mechanical Fatigue Testing**, Rolls Royce, Derby, UK, 1993
- **Local Strain and Temperature Measurement in Non-Uniform Fields at Elevated Temperatures**, BAM, Berlin, Germany, 1995
- **Thermocouple Calibration and Usage for Materials Testing**, NPL, Teddington, UK, 1996
- **Cyclic Stress-Strain Data: Testing and Interpretation**, IOM, London, UK, 1999
- **The Practicalities of Thermo-Mechanical Fatigue Testing in the New Millennium**, Darmstadt, Germany, 2000
- **HT Multi-axial Creep Testing & Interpretation**, IOM, London, UK, 2001
- **Miniaturised Testing Techniques**, NPL, London, UK, 2003
- **Generation and Interpretation of Materials Properties Data**, Serco Assurance, Warrington, UK, 2004
- **TMF Workshop 2005**, BAM, Berlin, D, 2005
- **Welds 2005**, GKSS, Geesthacht, D, 2005

- **Mechanical Testing for Next Generation Nuclear Systems**, JRC Petten, NL, 2008

More information on the HTMTC can be found at <http://www.htmtc.com> or <http://www.structuralintegrity.eu>

Venue

The workshop will take place in the Ludwig-Erhard-Conference Hall at the Federal Institute for Materials Research and Testing in Berlin. The German Capital provides numerous opportunities for touring historical sites, museums, concerts, theatres and for shopping. For an overview of the opportunities, please check

<http://www.berlin.de>

Arrival

By plane: Airport Tegel (TXL)
Airport Schönefeld (SXF)

By train: from all directions by using the fast InterCityExpress (ICE), InterCity (IC), EuroCity (EC)

Contact

Dr.-Ing. Hellmuth Klingelhöffer
Phone: +49 30 8104 1521

Secretariat: Anja Archie
Phone: +49 30 8104 1529
Fax: +49 30 8104 1527

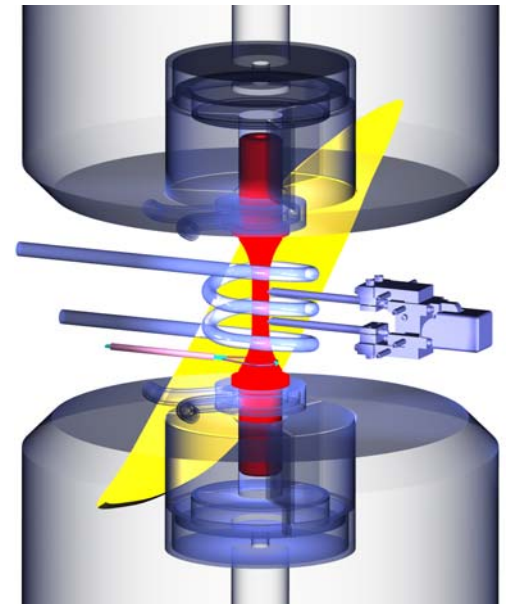
BAM Federal Institute for Materials Research and Testing
Division V.2 - Mechanical Behaviour of Materials
Unter den Eichen 87
D - 12205 Berlin
Germany

E-mail: [tmfconf\(at\)bam.de](mailto:tmfconf(at)bam.de)
Internet: <http://www.tmf-workshop.bam.de>



2nd International Workshop on Thermo-Mechanical Fatigue (TMF-Workshop 2011)

1st circular and call for papers



May 12th - 13th, 2011
BAM Federal Institute for Materials
Research and Testing
Berlin, Germany

