



INTERNATIONAL FEDERATION
FOR HEAT TREATMENT AND SURFACE ENGINEERING

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Working Group on: Heat treatment and Surface Engineering of tool materials

Following discussions during the 19th Congress in Glasgow Scotland last year, the IFHTSE Executive Committee is now gauging the interest of Members in the formation of a **Working Group on aspects of heat treatment and surface engineering of tooling materials** (inevitably with focus on tool steels).

Our Vice President Prof Reinhold Schneider is now collecting views by the circulation of a questionnaire among IFHTSE association members and a number of companies. The responses received at the date of this Bulletin show considerable interest. One important outcome is that the work of the potential Group would be able to build upon and enhance some long-standing effort over recent years carried out by the Technical Division on Heat Treatment and Surface Engineering of IFHTSE Brazilian member association **ABM**. For almost a decade, this body has organised the **'Tool, Die and Mould Chain Summit: - Innovation in tooling solutions and increased competitiveness'**. The population involved is composed of toolmakers, designers, manufacturers and buyers of moulds, dies, etc. The 10th in this series of meetings will be held in São Paulo in August 2012. Main topics are: Management, Manufacturing, Market and Design. ABM has also organised a workshop **'Toolmaker Talk'**, a complementary initiative to the annual meeting, which concentrates on dissemination of scientific and technical knowledge - and management - related to the production of tools, dies and moulds.

As reported earlier, as a result of discussions among the interested parties, mainly the industrial companies concerned, the '4th IFHTSE Conference on Heat Treatment and Surface Engineering of Tools and Dies' has been integrated into the 9th International Tooling Conference (Leoben Austria 11-14 Sept. 2012). See below. An exploratory meeting of a Working Group may be scheduled for some time during that conference.

Contact: reinhold.schneider@fh-wels.at



TOOL 2012 – Early registration open

Registration is now open for TOOL 2012, the 9th International Tooling Conference, 11-14 September 2012, Leoben Austria. The discounted rate now offered is available until 15 June, after which the registration fee will be considerably higher. Go to www.tool2012.at

2nd Mediterranean Conference on heat treatment and surface engineering

The 2nd Mediterranean Conference on Heat Treatment and Surface Engineering is now dated and located:

11-14 June 2013, Dubrovnik-Cavtat, Croatia
Contact: smoljan@riteh.hr (Prof B Smoljan)

PUBLISHING

Special issues: The editorial team of *International Heat Treatment and Surface Engineering* is planning special issues on:

- Furnaces (plant design; equipment; energy management)
- Surface engineering process development (plant and equipment supply; energy aspects)
- Processing of non-ferrous materials

Contact: m.hull@maney.co.uk (Mark Hull)

Contents of issue 2012 no. 1 *International Heat Treatment and Surface Engineering*

- Quenching: current status and future developments (Global 21 series)
- New process for accelerated carbide spheroidisation of RSt37-2 steel
- Differences in the nitrided layer between classic active screen plasma nitriding and active screen plasma nitriding with a semispherical cathodic cage
- Modification of the hot work tool steel surface by different thermochemical treatments
- Properties of different compositions of oils as quenchants
- Plasma nitriding and nitrocarburizing of a supermartensitic stainless steel
- Development of a high-performance gas carburizing furnace
- Nitriding effect on fatigue resistance of gray and nodular cast irons

PROGRESS AND DEVELOPMENT

In 1999, the ASM Heat Treating Society (IFHTSE member) produced a 'Heat Treating Technology Roadmap' and 'Heat Treating Industry Vision 2020'. Vision 2020 described the changes in both the structure of the industry and in heat treating processes needed to reduce energy consumption, operating costs, and environmental impact by 2020. The related R&D Plan viewed needs from the viewpoints of **plant and equipment, process, materials, energy and the environment**.

The HTS R&D Committee reviewed each of these areas in 2006, identifying research completed or underway. In 2012, The R&D Committee will carry out another review and plan to publish their findings. Anyone interested in taking part, or for more information, contact Sarina Pastoric (sarina.pastoric@asminternational.org).

There should be useful synergy between the ASM HTS scheme and IFHTSE's publications in the Global 21 series. IFHTSE is asking its members to select themes, specific issues, problems, etc. in heat treatment and surface engineering in order to understand global similarities and differences in emphasis or order of importance for allocation of time and resources. **Tooling** is certainly one area of priority with crucial industrial relevance. Any brief glance at the content of conference programmes over the last few years will also point clearly to the significance of improving understanding of **quenching processes and effects**, especially in the general context of **distortion engineering**. Directly linked is work on improving understanding and, hopefully, predictability through better input for **mathematical modelling and simulation techniques**.

In the context of reviewing global industrial and R&D trends, synergy is also looked for from IFHTSE's collaborations with other organs with international coverage – see over



PUBLISHER COLLABORATIONS

theMonty.com

IFHTSE collaborates with *The Monty* – monthly newsletter and website www.themonty.com. Contents include up-to-date heat treatment news from companies, listings of used equipment, business opportunities, and employment; plus short articles and opinion pieces. *The Monty's* wide readership covers North America (50 %), followed by Europe (25 %), Asia (20 %) and South America (5%).

Find complete coverage, details, and all information including advertising rates on the website: www.themonty.com/

Industrial Heating

IFHTSE collaborates with *Industrial Heating* - the world's largest and most comprehensive integrated media resource focusing on high-temperature thermal processing technology and practical applications. Editorial coverage includes:


Heat Treating
Process Control & Instrumentation
Ceramics & Refractories/Insulation
Industrial Gases/Combustion
Vacuum/Surface Treatment
Materials Characterization & Testing
Melting/Forming/Joining
Heat & Corrosion Resistant
Materials/Composites Sintering/Powder
Metallurgy


IH website www.industrialheating.com shows: 53,270 total pass-along readership, with every copy being seen by an average of 2.18 people


- 85% recommend, specify or authorize purchases
- 74% captive (in-house) heat treaters
- 13% commercial/contract heat treaters
- 13% industry suppliers

CONFERENCE DIARY

2012

 **1st International Conference on Energy and the Future of Heat Treatment and Surface Engineering**
25-27 June - Bangkok, Thailand (www.mtec.or.th/EFhtse2012/)

 **6th International Conf. Quenching and Control of Distortion / 4th International Conf. on Distortion Engineering**
10-13 September – Chicago II, USA
(www.asminternational.org/qcd)

 **9th Tooling Conference / 4th International Conference on Heat Treatment of Tools and Dies**
11-14 September – Leoben, Austria (www.tool2012.at)

HK 2012

10-12 October 2012 Wiesbaden, Germany (www.awt-online.org)


BALTMATRIB - 21st International Baltic Conference: Engineering materials and tribology
18-19 October - Tallinn, Estonia (www.itu.ee/baltmatrib2012)

 **20th Congress IFHTSE**
23-25 October - Beijing, China (www.20ifhtse.org)

24th National Conference on Heat Treatment with International Participation
27-29 November – Jihlava, Czech Republic (www.asociacetz.cz)


2013

 **European Conference on Heat Treatment and Surface Engineering**
25-26 April - Luzern, Switzerland (b.kuntzmann@iistemann.com)

 **2nd Mediterranean Conference on Heat Treatment and Surface Engineering**
11-14 June, Dubrovnik-Cavtat, Croatia (smoljan@riteh.hr)

ASM Heat Treating Society 27th Conference and Exposition
16-18 September Indianapolis, Indiana, USA
(www.asminternational.org/)

2014

 **21st Congress IFHTSE / incorporating European Conference on Heat Treatment and Surface Engineering**
May? Munich, Germany (awt.ev@t-online.de)

See next page for more detail on the 20th Congress
-----October 2012.....



The 20th Congress of the International Federation for Heat Treatment and Surface Engineering takes place in Beijing on 23-25 October 2012 using the excellent facilities of the Xijiao Hotel in North Western Beijing not far from Beijing University and Tsinghua University. There are good connections with the rest of the capital.

The Congress is organised for IFHTSE by its China member the Chinese Society for Heat Treatment (CHTS). It has the support of: National Natural Science Foundation of China, Chinese Mechanical Engineering Society, Beijing Research Institute of Mechanical & Electrical Technology, Surface Engineering Institution of CMES, and the National Key Laboratory for Remanufacturing.

20ifhtse@chts.org.cn
www.20ifhtse.org

Important Dates

Abstract submission deadline:	31 May 2012
Manuscripts submission deadline:	1 Sep 2012

Offers of contributions

The organising committee invites abstracts of papers for oral or poster presentation at the Congress. Send a title and an abstract to the Conference Secretariat by 31 May 2012 for consideration by the Technical Committee. All papers, abstracts, presentations and communications must be in English.

Authors of accepted contributions will be required to submit a 6-page camera ready manuscript.

Programme

Congress themes include but are not limited to:

- Phase Transformations
- Microstructure and Properties
- Advanced Heat Treatment Technologies
- Modelling and Simulation
- Quenchants and Quenching
- Control of Residual Stress and Distortion
- Equipment and Process Control
- Energy and Environment
- PVD & CVD
- Thermal Spray
- Laser, Electronic Beam, Ion Surface Modification

Publication

A number of publications will be suggested for authors to submit papers according to the conditions of each publication (including: *Surface Coating and Technology*, *JMST – Journal of Materials Science and Technology*, and the IFHTSE journal *International Heat Treatment and Surface Engineering*. Some authors will be contacted directly by the Joint Editors of *International Heat Treatment and Surface Engineering*.

Invited papers

A number of papers by distinguished authors will be presented at the Opening Session and as Plenary Papers during the Congress, including contributions from Altena (Austria), Kolzsvary (Romania), Löser (Germany), Matthews (UK), Sisson (USA), Tikhonov (Russia), Watanabe (Japan), Wood RJK (UK), plus well-known academicians (Chinese Academy of Engineering): XU Binshi and Zhao Zhenye. Prof XU is a Fellow of IFHTSE; Prof Zhao is current President of CHTS

