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1st Poster Session Award at the International Tooling Conference

This is a great opportunity for students and young scientists under 35 years of age to win prize money, network with meeting attendees from the industrial and scientific community and present current research on tool steels. Participate in the 1st Poster Session Award, which will be held in Leoben at the 9th International Tooling Conference. The Poster Session will be on Wednesday 13 September 2012, from 19:00 to 22:00..

Eligibility

- Poster presentations must be relevant to conference topics.
- All authors must be registered at the 9th International Tooling Conference and be present to put up and take down their posters.
- Each author may use up to a 1.2 m x 1.2 m space. The author will be assigned a display number prior to the conference designating where the poster should be hung.
- Any visual aids that might clarify the results of the work are encouraged. Do not, however, post the text of the paper. Graphics should be simple, colourful, well-labelled and clear. The title should be written in letters 2 cm to 5 cm of size and all material presented should be readable from a distance of 2 m.

In order to participate at the Poster Award, a preliminary version of the posters must be submitted as a pdf document by 15 August 2012!

tool2012@unileoben.ac.at

LQD PROJECT UPDATE

The Liquid Quenchants Database Project, formally approved by the 40th Assembly of the Governing Council in Glasgow Scotland in October 2011 was launched at the end of that year.

Work is now in progress on Phase 1 of the Project. Oil samples have been supplied to the Phase 1 participants. The procedure is that members of the team will use a specially designed reporting sheet to record data from 'cooling curve acquisitions' (CCA). The test procedure in summary is:

- 3 types of oil investigated by using the ISO 9950 method
- Each oil sample measured at 3 quenchant temperatures
- Each measurement is then repeated
- The resulting number of cooling curves is then $3 \times 3 \times 2 = 18$

The objective is to gather a complete set of responses and data by mid-June, though this date may be missed due to some problems experienced with the shipping company involved in delivering the samples.

For a description of the Project see the journal International Heat Treatment and Surface Engineering 2011 volume 5, no. 2 pages 48-49 and the Editorial for that issue. It is expected that a substantial report will be available at the time of the '6th International Conf. Quenching and Control of Distortion / 4th International Conf. on Distortion Engineering September' in Chicago 9-13 September 2012.

Project Leader: Imre Felde, University of Óbuda in Budapest, Hungary (imre.felde@gmail.com)



Honour for Kolozsváry

Dr Zoltán Kolozsváry, IFHTSE Treasurer (President 1998-99) has been awarded the degree of Doctor Honoris Causa by the University of Miskolc in Hungary. The citation refers to his lifelong contributions to research and development in heat treatment and surface engineering and to his success in ensuring the wider recognition of the crucial importance of the processes involved. The Award Ceremony will be held at the University on 29 June 2012.

Contents of issue 2012 no. 2 of *International Heat Treatment and Surface Engineering*

- Conference report (European Conference Strasbourg France March 2012)
- Systematic analysis of cooling curves for liquid quenchants
- Effect of TiO₂ nanoparticles on fluid quenching characteristics
- Effective technical collaboration in heat treatment process modelling - a case study
- Effect of deep cryogenic treatment on the dilatometric curve and tribological properties of high speed steel
- Carbo-oxidizing of titanium by diffusion treatment in carbon-oxygen containing media
- Novel pack cementations: direct current field assisted pack cementations
- Plasma transferred arc hardfacings reinforced by chromium carbide-based cermet particles

TTT Brazil 2012

The 6th in the series of two-yearly Brazilian Conferences on Heat Treatment - VI TTT 2012 (Portuguese language) will be held 17-20 June, in Atibaia SP, 59 km from Sao Paolo. More than 120 papers are expected. Industrial support and representation includes:

Air Products, All duct, Archem, ASTT-Aichelin Group, Busch, CK, Combustol, EDG, Engefor, First Ovens, Inductotherm, Industrial Heating, Isoflama, Machrotherm, Marwal, SMS Elotherm, Tecnomcom, Villares Metal, and Zeiss.

Input from many universities includes papers from Portland State and UN Colombia.

The wide subject scope, with emphasis on the future alternatives for Brazil, includes:

Heat treatment and thermochemical treatment of steels; Heat treatment of nonferrous metals; Physical metallurgy and phase transformations; Microstructural characterization techniques; Effect of alloying elements on microstructure and properties; Analysis of defects and failure; Salt baths, atmospheres, quenching; Equipment for process control and quality control; Induction heating; Furnaces, peripherals and supplies; Cleaning, preparation and finishing; Maintenance; Automation and instrumentation; Simulation; Quality and productivity; Trends, developments and new technologies; PVD and CVD; Safety and environment; Management

The event is organised by Metallum Eventos Técnicos e Científicos, enjoys extensive company sponsorship and has the support of several organisations including IFHTSE Brazil member ABM.

www.metallum.com.br/ttt2012

Distortion engineering: 'The scientific and technological investigation of the origins and causes of geometrical inadequacy during the manufacture of engineering components, and the measures and procedures that can be taken to compensate for, or minimize, them'

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6 QCD / 4 IDE : Chicago

Manufacturing and economic problems caused by unsatisfactory component geometry have long been shown to be the result of a complex of factors and, recently, there has been general acceptance that the phenomenon of distortion should be seen as a 'system attribute'. Each stage in the manufacturing process can, and usually does, contribute to the end-point distortion. This adds weight to the need for a global approach in addition to specific investigations focused on the optimization of single aspects e.g. the improvement of quenching characteristics.

The 1st International Conference on Quenching and Distortion was held in Lincolnshire IL in 1992. Subsequent conferences in this series initiated by ASM/HTS were held in Cleveland OH, Prague, Beijing and Berlin. They demonstrated rapid growth in interest in the application of process modelling, the study of quenching, and quenchant development. A similar picture emerges from the series: 'International Conference on Distortion Engineering' (IDE) 2005, 2008, and 2011 held in Bremen Germany. This series was a component of a German Government programme conducted through Arbeitsgemeinschaft Wärmebehandlung und Werkstofftechnik e.V. (AWT) by IWT Bremen.

The two series are merged for 2012, yielding synergy and concentration of effort.

Contributions have been received covering a wide range of subjects relating to quenching and control of distortion:

- Agitation Measurement and Control
- Computational Fluid Dynamics
- Control and Elimination of Distortion
- Equipment Design
- Finite Element Analysis and Constitutive Equations; Boundary Conditions
- Fundamentals Principles
- Heat Transfer as Applied to Distortion Control
- Material and Shape Optimization
- Modelling of Processes and Phenomena
- Process Methodology to Control Distortion and Residual Stresses
- Quenchants (Oil, Polymer and Other Quenchants)
- Relationship of Microstructure and Quenching

Registration

Fees include:

- One copy of the conference proceedings
- Welcome Reception (on 9th)
- Conference dinner
- Lunches

A special program for accompanying guests will also be offered.

www.asminternational.org/content/Events/qcd/registration.jsp

Proceedings

CD Proceedings of the 6th International Quenching and Control of Distortion Conference / 4th International Distortion Engineering Conference will be available at the event. Each Full Conference registrant will receive a copy of the proceedings on CD. If you are not a full conference registrant, you can buy a copy of the proceedings, by completing the appropriate section on the registration form (see web address above)

International Heat Treatment and Surface Engineering journal

Thesis work – progress reports

Work is in hand to prepare a series of descriptions of doctorate/masters and similar work in progress at universities and R&D establishments. The series is planned to open, in issue no. 3 or 4 for 2012, with short accounts of work in the School of Materials Science and Engineering of Shanghai Jiao Tong University on: 'Laser cladding layers' (from the Laser Processing Center of SMSE)


Other work from SJTU is also planned on:


- Heat treatment and computer simulation
- Heat treatment and phase transition of alloys
- Thin foils / nanostructures
- Corrosion protection
- Heat treatment of light metals


The editorial team would be glad to receive proposals for other input to this series (contact robert.wood@ifhtse.org in the first instance).

CONFERENCE DIARY

2012

 **1st International Conference on Energy and the Future of Heat Treatment and Surface Engineering**
25-27 June - Bangkok, Thailand

 **6th International Conf. Quenching and Control of Distortion / 4th International Conf. on Distortion Engineering**
9-13 September – Chicago II, USA

 **9th Tooling Conference / 4th International Conference on Heat Treatment of Tools and Dies**
11-14 September – Leoben, Austria

HK 2012

10-12 October 2012 Wiesbaden, Germany

BALTMATRIB - 21st International Baltic Conference: Engineering materials and tribology
18-19 October - Tallinn, Estonia

 **20th Congress IFHTSE**
23-25 October - Beijing, China

24th National Conference on Heat Treatment with International Participation
27-29 November – Jihlava, Czech Republic

2013


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

