Program

European Conference
ON HEAT TREATMENT 2016
and
3rd International Conference on Heat Treatment and Surface Engineering in Automotive Applications

11 – 13 May 2016
Prague, Czech Republic, Břevnov Monastery
<table>
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<tr>
<th>TIME TABLE</th>
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**WEDNESDAY**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tr>
<td>08:00</td>
<td>Registration</td>
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<tr>
<td>09:30</td>
<td>Opening Ceremony</td>
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<tr>
<td>10:00</td>
<td>Keynote lectures</td>
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<tr>
<td>12:00</td>
<td>Lunch</td>
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<tr>
<td>13:20</td>
<td>Coffee Break, Session A - Theresian Hall, Session B - Abbots Room</td>
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<tr>
<td>15:10</td>
<td>Coffee Break, Session A - Theresian Hall, Session B - Abbots Room</td>
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<tr>
<td>15:30</td>
<td>Walking Welcome Drink</td>
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<tr>
<td>16:00</td>
<td>Visit of St. Margaret Church, History of Brevnov Monastery, Organ Concert</td>
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**THURSDAY**

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>09:00</td>
<td>Session A - Theresian Hall, Session B - Abbots Room</td>
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<tr>
<td>10:40</td>
<td>Coffee Break, Session A - Theresian Hall, Session B - Abbots Room</td>
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<tr>
<td>11:00</td>
<td>Lunch</td>
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<tr>
<td>15:40</td>
<td>Session A - Theresian Hall, Session B - Abbots Room</td>
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<tr>
<td>19:00</td>
<td>Gala Dinner</td>
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**FRIDAY**

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<thead>
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<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>09:00</td>
<td>Theresian Hall, Abbots Room</td>
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<tr>
<td>10:40</td>
<td>Announcement of the Poster Award winner, sponsored by Burgdorf GmbH &amp; Co.KG</td>
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<tr>
<td>10:50</td>
<td>Announcement of the Aichelin Young Speakers Award winner, sponsored by Aichelin</td>
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<tr>
<td>11:00</td>
<td>Announcement of the European Conference on Heat Treatment 2017</td>
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<tr>
<td>11:10</td>
<td>Closing Ceremony</td>
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<tr>
<td>11:30</td>
<td>Lunch</td>
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<tr>
<td>13:00</td>
<td>Excursion to Škoda Auto a.s., Vrchlabí</td>
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**Chairmen of the Conference**

- Schneider Reinhold
  - IFHTSE, Austria
- Stolař Pavel
  - ATZK, Czech Republic

**International Committee**

- Bruchet Pierre
  - A3TS, France
- Dubach Roland
  - ASTT, Switzerland
- Feilde Imre
  - IFHTSE, Hungary
- Haase Brigitte
  - AWT, Germany
- Hock Stefan
  - IFHTSE, Italy
- Jacquot Patrick
  - A3TS, France
- Kolozsváry Zoltán
  - S.C. Plasmaterm S.A., Romania
- Kuntzmann Bernard
  - Listemann AG, Switzerland
- Löser Klaus
  - AWT, Germany
- Petta Danilo
  - AIM, Italy
- Vandewiele Bernard
  - VWT, Belgium

**Scientific Committee**

- Altena Herwig
  - AICHELIN Holding GmbH, Austria
- Denis Sabine
  - Université Henri de Poincaré, Nancy, France
- Dlouhý Ivo
  - VUT Brno, Czech Republic
- Jurči Peter
  - STU Trnava, Slovak Republic
- Kříž Antonín
  - ZČU v Plzni, Czech Republic
- Lohrmann Michael
  - AWT, ZF, Germany
- Lübben Thomas
  - IWT Bremen, Germany
- Troell Eva
  - Sverea IVF, Sweden
- Zenker Rolf
  - Zenker Consult, Germany
- Zoch Hans-Werner
  - IWT Bremen, Germany

**Local Organizing Committee**

- Musilová Alexandra
  - ATZK, Czech Republic
- Podroužková Lucie
  - ECOSOND s.r.o., Czech Republic
- Vráblík Filip
  - ECOSOND s.r.o., Czech Republic

**Conference Secretary**

- ATZK Office
  - K Vodárně 531, 257 22 Čerčany, Czech Republic
  - Phone/Fax: +420 317 777 772-5
  - E-mail: conference2016@asociacetz.cz
  - www.htconference-prague2016.cz

**Payment - Via Bank Transfer**

- Bank: Komercni Banka, a.s.
  - Number of Account: 115-1025660237 / 0100
  - IBAN Format: CZ85 0100 0001 1510 2566 0237
  - BIC: KOMBCZPP

- Details of payment: ECHT2016 + „name of participant“
**WEDNESDAY - MORNING  11. 5. 2016**

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**8:00 REGISTRATION**

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**THERESIAN HALL**

**Opening Ceremony**

9:30  Welcome addresses by:

- Pavel Stolař, ATZK President
- Reinhold Schneider, IFHTSE past-President
- Representative of Automotive Industry Association
- Introduction of Mr. Dr. Thomas Lübben as a Fellow of IFHTSE presented by President of IFHTSE Patrick Jacquot

**Keynote lectures**

Chairpersons: Reinhold Schneider, IFHTSE, Pavel Stolař, ATZK

10:00  Automotive Engineering - Driving force for the heat treatment technology
      H.W. Zoch, Stiftung Institut für Werkstofftechnik, Germany

10:30  Controlled atmosphere furnaces and process technology in Automotive Industry - state of the art and outlook
      H. Altena, AICHELIN Holding G.m.b.H., Austria

11:00  Vacuum heat treatment processes and systems - state of the art and trends
      K. Löser, ALD Vacuum Technologies GmbH, Germany

11:30  Electron beam surface treatment in automotive industry - History, state of the art and prospects
      R. Zenker, TU Bergakademie Freiberg, Germany

**Opening of the Exhibition**

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**ABBOTS ROOM**

LIVE BROADCAST FROM THE THERESIAN HALL TO ABBOTS ROOM

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**WEDNESDAY - MORNING  11. 5. 2016**
**WEDNESDAY - AFTERNOON**  
**SESSION A - THERESIAN HALL**

Quenching technology, quenching distortion and stresses  
Vacuum heat treatment of metals and alloys

Chairpersons: Václav Hošek, ECOSOND s.r.o., Patrick Jacquot, BODYCOTE

13:20  Properties and range of application of liquid quenchants with particular emphasis on the car manufacturing industries  
R.Braun, BURGDORF GmbH & Co. KG, Germany

13:50  Vacuum heat treatment with over pressure gas quenching and cryogenic process of large scale series production parts made of lower alloyed steel 1.2067 = 100Cr6  
A.Dappa, IVA Schmetz GmbH, Germany

14:10  Care and maintenance of oil quenchants used for quenching automotive components  
D.S.MacKenzie, Houghton International, Inc., USA

14:30  New trends in heat treating and quenching  
D.S.MacKenzie, Ipsen International GmbH, Germany

14:50  Intermetallics for automotive industry  
P.Novák, University of Chemical Technology in Prague, Czech Republic

15:10 – 15:30 Coffee Break

15:30  Distortion of heat treated components – basics and examples for reduction  
T.Lübben, Stiftung Institut für Werkstofftechnik, Germany

16:00  Distortion of grooved steel cylinders due to high speed quenching  
F.Frerichs, Stiftung Institut für Werkstofftechnik, Germany

16:20  Experimental study and modeling of quenching processes of ultra high strength low alloy steel  
Weishi, Tsinghua University, China

16:40  CFC and carbon in heat-treatment of steel  
M.Bartelheim, GTD Graphit Technologie GmbH, Germany

17:00  Carbon/Carbon materials for heat treatment applications  
G.Groos, Schunk Carbon Technology, Germany

17:20  Heat treatment of a stainless bearing steel for special purposes  
P.Suchmann, COMTES FHT a.s., Czech Republic

17:40  END of the first day

18:00  WALKING WELCOME DRINK (BREVNOV MONASTERY COURTYARD)

19:10  Visit of St. Margaret Church, History of Brevnov Monastery, Organ Concert

19:50  END

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**WEDNESDAY - AFTERNOON**  
**SESSION B - ABBOTS ROOM**

Steel grades for automotive industry, heat treated materials, mechanical properties, phase transformations, microstructure and properties relationships

Chairpersons: Pavel Novák, VŠCHT Praha, Eva Troell, Swerea IVF

13:20  Close relations between metallic materials, heat treatment and thermochemical treatment on the microstructure: contribution of metallographic examinations performed on automotive parts in through several case studies  
P.Jacquot, BODYCOTE, France

13:50  Improved materials and enhanced fatigue resistance for gear components  
V.Heuer, ALD Vacuum Technologies GmbH, Germany

14:10  In-line heat treatment of flat products  
M.Chabíčovský, Heat Transfer and Fluid Flow Laboratory Brno University of Technology, Czech Republic

14:30  Effect of conditions of cryogenic treatment on the properties of the selected tool steels for cold work  
J.Sobotová, Czech Technical University in Prague, Czech Republic

14:50  Study of the properties and structure of the selected tool steels for cold work depending on the parameters of heat treatment  
M.Kuík, Czech Technical University in Prague, Czech Republic

15:10 – 15:30 Coffee Break

15:30  Subzero treatment of cold work tool steels – metallurgical background and effect on microstructure and properties  
P.Jurči, Slovak University of Technology in Trnava, Slovak Republic

16:00  The mechanism causing the surface hardness instable after quenching used by 60SiCrV steel  
Jang Herng-Shuoh, China Steel Corporation, China

16:20  Lifetime increase of tools for fine blanking of steel sheet  
D.Claus, SIRRIS, Belgium

16:40  Investigation of the mesoscale behavior of heterogenous steels concerning fracture initiation  
D.Said Schicchi, Stiftung Institut für Werkstofftechnik, Germany

17:00  Effects of deep cryogenic treatment on properties of aluminium bronze  
A.Kříž, University of West Bohemia, Czech Republic

17:20  An investigation of the tribological behavior of high-speed tool steels at elevated temperatures  
M.Walter, Ruhr-Universität Bochum, Lehrstuhl Werkstofftechnik, Germany

17:40  END of the first day
THURSDAY - MORNING
SESSION A - THERESIAN HALL

Thermochemical heat treatment in series production (carburizing, nitriding)
Design and construction of industrial heat treatment equipment for series production

Chairpersons: Jiří Stanislav, Bodycote HT s.r.o., Bernard Vandewiele, BVDW Consultancy VOF

9:00  Answers to seven frequently asked questions regarding cleaning and heat treatment
B. Haase, Hochschule Bremerhaven, Germany

9:30  Opportunities and challenges with the next generation high efficiency burners and radiant tubes
J.G. Wünning, WS Warmeprozesstechnik GmbH, Germany

9:50  Integration of heat treatment into the production line
H. Altena, W. Gay*, AICHELIN Holding G.m.b.H., Austria, *EMA-Indutech GmbH, Germany

10:20  Accelerated carburizing in atmosphere furnaces avoiding intergranular oxidation
G. Plicht, Air Products GmbH, Germany

10:40 – 11:00 Coffee Break
Brevnov Monastery Courtyard

11:00  Low temperature carburizing of stainless steel – an alternative to hard chrome plating
U. Oberste-Lehn, Bodycote Hardiff GmbH, Germany

11:20  Low pressure carbonitriding with methylamine
R. Reimert, Karlsruhe Institute of Technology, Engler-Bunte-Institut, Germany

11:40  Heat treatment integrated in the machining process
P. Pouloux, ECM Technologies, France

12:00  UniCase Master®-in-line, low-distortion, precision case hardening for automotive, transmission & bearing Industries
M. Korecki, SECO/WARWICK Europe Sp. z o.o., Poland

12:20  The use of production-integrated vacuum heat treatment for serial production of transmissions in an automotive plant
P. Anděl, ŠKODA AUTO a.s., Czech Republic

12:40 – 14:00 Lunch
Brevnov Monastery Basement

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THURSDAY - MORNING
SESSION B - ABBOTS ROOM

Surface hardening technology (induction hardening, laser, electron beam), coating technology (thermal spraying, coating, PVD, CVD, plasma,..)

Chairpersons: Peter Jurči, STU Trnava, Jiří Hájek, ZČU Plzeň

9:00  Mobile laser hardening system for industrial application
E. Hensel, ALOtec Dresden GmbH, Germany

9:20  One step ahead - innovative usage of laser beam in vacuum for automotive applications
F. Vráblík, ECOSOND s.r.o., probeam, Czech Republic, Germany

9:40  Process development and control for serial production with the VHM and HHM type induction hardening equipments
G. Molnár, AAGES Ltd., Romania

10:00  Process optimization by multiple frequency design of induction hardening processes for automotive parts
A. Ulferts, Inductoheat Europe, Germany

10:20  Investigation on the effect of short heat impulses on the microstructure and mechanical properties of peak aged AW-6082
B. de Graaff, Karlsruher Institut für Technologie, Institut für angewandte Materialien – Werkstoffkunde, Germany

10:40 – 11:00 Coffee Break
Brevnov Monastery Courtyard

11:00  Efficient Process Control for Induction Hardening
E. Niessner, LumaSense Technologies GmbH, Germany

11:20  Performance and properties of an additive manufactured coil for MHZ-application in inductive heat treatment
M. Habschied, KIT IAM-WK, Germany

11:40  Utilization of PVD hard coating after electron beam surface treatment for highly loaded cast iron components
A. Buchwald, TU Bergakademie Freiberg, Germany

12:00  Tribological advantages of DLC coatings for highly loaded applications: Bearings
P. F. Cardey, CETIM, France

12:20  Oxidation resistance and structural stability of superhard PVD coatings
M. Haršáni, Slovak University of Technology in Trnava, Slovak Republic

12:40 – 14:00 Lunch
Brevnov Monastery Basement
**THURSDAY - AFTERNOON**

**SESSION A - THERESIAN HALL**

**Chairpersons:** Filip Vráblík, ECOSOND s.r.o., Klaus Löser, ALD Vacuum Technologies GmbH

14:00  **Advanced modular and continuous heat treatment concepts**
R. Wethmar, IVA Schmetz GmbH, Germany

14:20  **Influence of the base material hardenability on effective case depth and core hardness**
B. Vandewiele, BVDW Consultancy VOF, Belgium

14:40  **Optimization of carburizing treatment for Nb-modified SAE 1022 carbon steel**
Hsu Hsiao-Hung, China Steel Corporation, China

15:00  **Properties of nitrided surfaces including post processes**
E. Troell, Swerea IVF, Sweden

15:20 – 15:40 Coffee Break

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**SESSION B - ABBOTS ROOM**

**Chairpersons:** Thomas Lübben, Stiftung Institut für Werkstofftechnik, Pavel Suchmann, COMTES FHT a.s.

14:00  **The principles of creation and selection of hardmetal consisting hardfacings for different abrasive wear conditions**
P. Kulu, Tallinn University of Technology, Estonia

14:20  **Neural network assisted design and optimization of hot work tool steel heat treatment**
B. Podgornik, Institute of Metals and Technology, Slovenia

14:40  **Estimation of temporospatial heat transfer coefficients by parallelized PSO approach**
I. Felde, Óbuda University, Hungary

15:00  **Numerical modelling of steel quenching**
B. Smoljan, University of Rijeka, Croatia

15:20 – 15:40 Coffee Break

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16:00  **A combined finite element - phase field model approach on the bainitic transformation**
D. Said Schicchi, Stiftung Institut für Werkstofftechnik, Germany

16:20  **Utilizing the internet of things to enhance lean manufacturin in gear heat treatment**
J. Kowalewski, Ipsen International GmbH, Germany

16:40  END of the second day

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19:00  **GALA DINNER**
Brevnov Monastery Basement
Welcome Toast on the Courtyard
FRIDAY - MORNING

THERESIAN HALL

Improved modelling capabilities and simulation of heat treatment and surface engineering Reliability and process control, series production control, measurement

Chairpersons: Herwig Altena, AICHELIN Holding G.m.b.H., Miloslav Kouřil, VUT Brno

9:00 In-situ monitoring of the microstructure evolution
O. Bruchwald, Leibniz Universität Hannover, Institut für Werkstoffkunde, Germany

9:20 Total quality in heat treatment: a global view and critical points for the future
B. Vandewiele, BVDW Consultancy VOF, Germany

9:40 RQP1: Heat treatment system survey and quality control
P. F. Cardey, CETIM, France

10:00 Information about quality system management requirements from heat treatment processes
S. Rašková, Czech Republic

10:20 Failure analysis of an automotive crankshaft
D. S. MacKenzie, Houghton International, Inc., USA

10:40 Announcement of the Poster Award winner, sponsored by Burgdorf GmbH & Co.KG

10:50 Announcement of the Aichelin Young Speakers Award winner, sponsored by Aichelin

11:00 Announcement of the European Conference on Heat Treatment 2017

11:10 Closing Ceremony

11:20 End of the Conference

11:30 – 12:30 Lunch
Brevnov Monastery Basement

13:00 EXCURSION TO SKODA AUTO A.S., VRCHLABI
Place to meet: in front of the front-gate of Brevnov monastery at 12:45

FRIDAY - MORNING

ABBOTS ROOM

LIVE BROADCAST FROM THE THERESIAN HALL TO ABBOTS ROOM

11:30 – 12:30 Lunch
Brevnov Monastery Basement

13:00 EXCURSION TO SKODA AUTO A.S., VRCHLABI
Place to meet: in front of the front-gate of Brevnov monastery at 12:45
POSTER SESSION

Optimizations of hardmetal reinforcement content in Fe-based hardfacings for abrasive-impact wear conditions
A.Surzhenkov, Tallinn University of Technology, Estonia

In-Line X ray residual stress measuring on shot peening process
Y.Kobayashi, SINTOKOGIO, LTD., Japan

Investigation of grain boundaries in alloy 263 after special heat treatment
I.Slatkovský, Slovak University of Technology in Bratislava, Slovak Republic

Preparation of high entropy alloy for wear resistant applications by powder metallurgy route
I.Moravčík, Institute of Materials Science and Engineering, Czech Republic

Protective paints for heat treatment - New developments in regards to requirements of health and safety as well as environmental regulations
R.Braun, NUSSELE GmbH & Co. KG, Germany

Investigation of fracture resistance of subzero-treated Cr-V cold work tool steel
J.Ptačinová, Slovak University of Technology in Bratislava, Slovak Republic

Influence of heat treatment on the thermal conductivity of copper infiltrated tool steels
S.Klein, Ruhr-Universität Bochum, Lehrstuhl Werkstofftechnik, Germany

Local electron beam heat treatment of forging dies
J.Matlák, Institute of Materials Science and Engineering, NETME centre, Brno University of Technology, Czech Republic

Posters will be displayed for the entire period to the conference. Possible changes to the program will be communicated during the conference.

ECHT PRAGUE 2016
EXCURSION
TO ŠKODA AUTO A.S., VRCHLABÍ
MAY 13TH, 2016

DEPARTURE: 13:00, BRENOV MONASTERY
ARRIVAL: 19:00, BRENOV MONASTERY

The short presentation will include the history and products of the company Škoda Auto a.s., it will be followed by a guided tour of the hardening shop, heat treatment lines 1 and 2, quenching press station, control methods, installation and assembly of gearboxes. The quality of selected types of tests will be demonstrated in the laboratory.

Place to meet: in front of the front-gate of Brevnov Monastery (in the main car park) on Friday, May 13th, 2016 at 12:45. Transport by bus is provided.

FOR MORE INFORMATION: PETR ANDEL, PETR.ANDEL@SKODA-AUTO.CZ
Exhibition Catalogue

Stand 1
ECOSOND s.r.o.
www.ecosond.cz
ECOSOND is a specialized company for the services, expertise, training and supplies in the field of heat treatment of steel. Supply of quenching media, furnaces and devices for temperature measurement and control. Production of O2 probes, accredited calibration laboratory.

GALTEX, spol. s r.o.
www.galtex.sk
GALTEX offers: Design, supply, assembly; Service and repair of machines and equipment for hardening plants; Used equipment reconstruction and renovation; Modernizing of heat treatment facilities; Repairs and changes of lining inside heat treatment equipment; Supply and assembly.

Stand 2
MDL s.r.o.
mdl.cz
The MDL company can offer you optimum wire cloth designed, welded mesh, precrimped wire mesh and pressed mesh, filters, curouts and moldings, wire baskets, fence parts, architecture, furniture, stitching wire, wires, insect mesh and mesh fencing.

Stand 3
LAC, s.r.o.
www.lac.cz
Since establishment in 1992, LAC company has manufactured more than 13,000 furnaces. Our furnaces and dryers are designed for applications in a wide range of heat treatment and technological processes. Our manufacture program includes a complete standard range of furnace and dryer lines, and also accommodates the individual requirements through the design of tailor-made projects.

Stand 4
Foerster Tecom s.r.o.
www.foerstergroup.cz
Non-destructive Testing, Metal Detection, Magnetics – FOERSTER stands for highest quality standards. No ifs, ands or buts. For precision and performance. For commitment and dependability. For the best and technologically most advanced range of products. Our highest goal is the satisfaction of our customers - worldwide.

Stand 5
Struers GmbH
www.struers.com
Today, Struers is the world's leading manufacturer of equipment and consumables for materialographic surface preparation of solid materials and supplier of entire range of hardness testers including equipment for image analysis. Struers has affiliates in 24 countries, qualified service personnel, experienced metallographers and a worldwide network of dealers.

Stand 6
Houghton CZ s.r.o.
www.houghton.cz
Houghton company was founded in 1856 in the United States and currently is part of an international group which owns factories and offices in more than 35 countries worldwide. Company main focus is development, production and distribution of products for metalworking. An integral part of a broad portfolio of Houghton products are products for thermal treatment. In this area products are splitted into the groups according to application as hardening polymers - AQUA-QUENCH and quenching oils - VOLUTA, HOUGHTO-QUENCH, MAR-TEMP, VACU-QUENCH.
Stand 7
TAV VACUUM FURNACES SPA
www.tav-vacuumfurnaces.com
Vacuum furnaces for sintering, brazing, heat treatment, UHV; advanced ceramics; aluminizing and diffusion bonding.

Stand 8
Rotaneo s.r.o.
www.rotaneo.sk
Our company supply spare parts for hotzones of vacuum furnaces (graphite, insulation, CFC, molybdenum and ceramic parts). Main production program of company ROTANEO s. r. o. is the production of technical ceramics, special silicon-carbide products and spare parts production - mechanical seals component of various manufacturers.

Kompozitum s.r.o.
www.kompozitum.sk
KOMPOZITUM Ltd. is a manufacturer of carbon and graphite products including their impregnations by various mediums like resins or metals. By manufacturing of graphite parts KOMPOZITUM focuses on all segments of heat-treatment industries. Products include mainly graphite elements for vacuum furnaces, sintering pads for PVD/CVD, continual casting moulds and mandrels, graphite parts for the glass industry, mixers and moulds for aluminum degassing, crucibles and moulds for precious metals casting.

Stand 9
Thermo-Calc Software AB
www.thermocalc.com
Thermo-Calc Software is a developer of software for calculations involving computational thermodynamics and diffusion controlled transformations in complex alloys. Applications to heat treatment include predicting furnace gas chemistry, formation and growth/dissolution of precipitate phases, multicomponent phase diagrams, kinetics of carburization, nitriding, homogenization and more.

Stand 10 and 11
Aichelin GmbH
www.aichelin.com
AICHELIN Group is leading supplier of plants for thermal and thermochemical treatment of metals.

Stand 12
Bandas Metalicas Codina S.L.
www.codinametal.com
Established more than one century ago, Barcelona-based CODINA manufactures all kind of product that comes from the metal wire. Mainly, CODINA produces Conveyor belts, Woven wire cloths, Knitted wire mesh, Filters and Demisters among others.
CODINA's commitment to the most modern technology and customer service is always the motivation to maintain the company in a privileged position within the European and worldwide markets, exporting to more than fifty countries.

Stand 13
Cronite CZ
The world leader in design and manufacture of heat treatment fixtures and furnace spare parts.

Stand 14
Air Products s.r.o.
www.airproducts.cz
Air Products (NYSE:APD) is a world-leading Industrial Gases company celebrating 75 years of operation.
Stand 15
REALISTIC a.s.
www.realistic.cz
Today the company is an important worldwide manufacturer of high-end industrial electric and gas furnaces. The portfolio of its products are devices for the technology: heat treatment and chemical heat treatment of metals; firing porcelain and ceramics; preheating before the forging and post processing; melting of nonferrous metals; drying or special warmings.

Stand 16
STANGE Electronic GmbH
www.stange-elektronik.com
The company was established in 1976. For more than three decades, we develop and manufacture innovative products in the automation and process technology. The product range has evolved from simple digital setpoint generators to today's sophisticated regulation and control systems.

Stand 17
GTD Graphit Technologie GmbH
www.gtd-graphit.de
Innovations with graphite and C/C materials from Toyo Tanso. GTD Technology GmbH is responsible for the distribution and the refinement of graphite and C/C materials from Toyo Tanso in Germany, Great Britain, Austria, Hungary, Poland, Czech Republic, Slovakia, and German speaking Switzerland. The product portfolio for heat treatment applications includes: heaters, connection elements, plates, insulating material, C/C racks, etc..

Stand 18
IVA Schmetz GmbH
www.schmetz.de
The portfolio of its products: Horizontal and vertical high temperature vacuum furnaces for gas quenching, tempering, brazing, annealing and sintering.
www.iva-online.com
The portfolio of its products: Horizontal retort furnaces, Sealed quench furnaces, Pit type furnaces, Box-type furnaces, Rotary hearth furnaces.
Fours Industriels BMI
www.bmi-fours.com
The portfolio of its products: High temperature vacuum furnaces for gas or oil quenching, tempering, annealing, brazing, sintering, low pressure nitriding, low pressure carburising, plasma nitriding.

Stand 19
WPX Faserkeramik GmbH
wpx-faserkeramik.de
WHIPOX is a thermal shock proof, non-corrosive oxide fiber ceramics material (OCMC). It is used for charge carriers in heat treatment, avoiding contact reactions of steel with CFC grids.

Stand 20
COMTES FHT a.s.
www.comtesfht.cz
COMTES FHT is a private research organization dealing with applied research of metallic materials and their processing technologies (melting, casting, forming, heat treatment). The company runs an experimental metallurgical plant equipped with VIM furnace, forging press, rolling mill and hardening shop. The laboratories of COMTES FHT offer complex services in mechanical testing, measurement of thermo-physical properties and metallographic analyzes.
Stand 21
ECM Technologies
www.ecm-furnaces.com
ECM TECHNOLOGIES is a high-tech manufacturer of industrial furnaces. The company is appreciated worldwide for its unquestionable leadership and its continuous research in heat treatment solutions. As ECM’s well-known ICBP® Low Pressure Carburizing technology.

Stand 22
Linde Gas a.s.
The Linde Group is a world leading supplier of industrial, process and specialty gases and is one of the most profitable engineering companies. Linde products and services can be found in nearly every industry, in more than 100 countries.

Stand 23
Schunk Carbon Technology
www.schunk-group.com
We develop customized high-tech products and equipment in the areas of carbon technology and ceramics, environmental simulation technology and climate technology, sintered metal technology and ultrasonic welding technology.

Stand 24
ALD Vacuum Technologies GmbH
web.ald-vt.de
ALD is a worldwide leading supplier of vacuum systems for melting, coating and heat treatment of metals.

Stand 25
Graphite Materials GmbH
www.graphite-materials.com
Graphite Materials GmbH is a manufacturing company for graphite components, a system supplier for high temperature applications as well as a distribution partner for graphite electrodes used in electric arc furnaces by the steel industry and a trading company for the materials natural graphite, graphite coating and foil as well as sepiolite.

Stand 26
EMO Oberflächentechnik GmbH
www.emo-ot.de
EMO Oberflächentechnik is your competent partner when it comes to parts cleaning – from design and planning to manufacture and commissioning and finally service and maintenance of the systems.

Stand 27
TAVENGINEERING S.p.A.
www.tav-engineering.com
Since 1999 TAVEngineering is fully dedicated to provide technical assistance and spare parts for the maintenance, renewal and repair of vacuum furnaces of any type and brand. Routine maintenances and emergency services are performed on site in the shortest possible time. TAVEngineering is a solid and reliable partner which can count on a motivated and highly qualified staff of engineers and technicians.

Stand 28
Ipsen International GmbH
www.ipsen.de
High quality standards and increasing raw material costs require us to be passionately committed to developing new heat treatment solutions. The outcome of our work: energy-efficient Ipsen furnaces and plant systems, as well as unrivaled products that are in demand all over the world and used by leading companies in the Automotive, Aviation and Aerospace sectors, to name a few.
Program for Accompanying Persons

Explore Prague in two half-day tours

The Vltava River as a silver ribbon divides Prague into two parts, which makes it easy to explore Prague in this way as well. By dividing the sightseeing of Prague into two parts, you will be able to see more details - and be sure you will show many of them! Each sightseeing tour takes 4 hours and includes lunch.

Wednesday, 11th May
Lesser Town, Prague Castle and Hradcany (Castle District)

10:00 Pick-up at Brevnov Monastery
10:00 - 10:15 Transfer by tram to Castle district
10:15 - 13:00 Tour of the Castle district, Prague Castle and Lesser town
- Strahov Monastery + viewing point
- Loreto Church
- Prague Castle (St. Vitus Cathedral, castle garden)
- Wallenstein garden

13:00 – 14:00 Lunch

14:00 – 14:30 Short walk in the Kampa Island - Kampa Island, Lennon Wall, Infant of Prague
14:30 Transfer by tram back to Brevnov Monastery

Thursday, 12th May
Old Town, New Town, Jewish Quarter

10:00 Pick-up at Brevnov Monastery
10:00 - 10:25 Transfer by tram to Charles Bridge
10:25 - 13:30 Tour of the Charles Bridge, Old Town and Jewish Town

13:30 – 14:30 Lunch

14:30 - 15:00 Transfer by tram back to Brevnov Monastery

What will we see?

Strahov Monastery
is a Premonstratensian abbey founded in 1143.

Charles Bridge - open air gallery
the oldest bridge in Prague dating back to 14th century with number of baroque statues of different saint.

Powder Gate
one of the very few remains of the medieval fortification of the Old Town.

Municipal House
most beautiful art-nouveau building in Prague.

St. James Church
stunning baroque church with one of the largest organ in Prague.

Ungrt
charming courtyard of a former medieval custom office.

Old Town Square
large historical square with many historical building and great importance in Prague history.

Astronomical Clock
one of the „must-sees“ in Prague - march of the Apostols and much more, real technical jewel which is more then 600 years old!

Old-New Synagogue
oldest synagogue in Central and Eastern Europe, which is still active.

Jewish Cemetery
and other synagogues of the Jewish Quarter.

Wenceslas Square
vibrant modern center of Prague.
Conference sponsored by

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