

Now open for registration:

3rd Mediterranean Conference  
on Heat Treatment and Surface Engineering  
Grand Hotel Bernardin, Portoroz



European Conference on Heat Treatment 2016  
and  
3rd International Conference on HTSE  
in Automotive Applications



The European Conference on Heat Treatment, and the 3rd International Conference on Heat Treatment and Surface Engineering in Automotive Applications of IFHTSE, was held 11-13 May 2016 at the Břevnov Monastery in Prague, Czech Republic. The conference was organized by ATZK – the Czech Association for the Heat Treatment of Metals in close cooperation with IFHTSE, the International Federation for Heat Treatment and Surface Engineering, and the Heat Treatment Associations of Austria, France, Germany, Italy, Switzerland and the Benelux countries. Approximately 240 people attended from all over Europe.



Pavel Stolař of the Czech association AZTK opening the conference

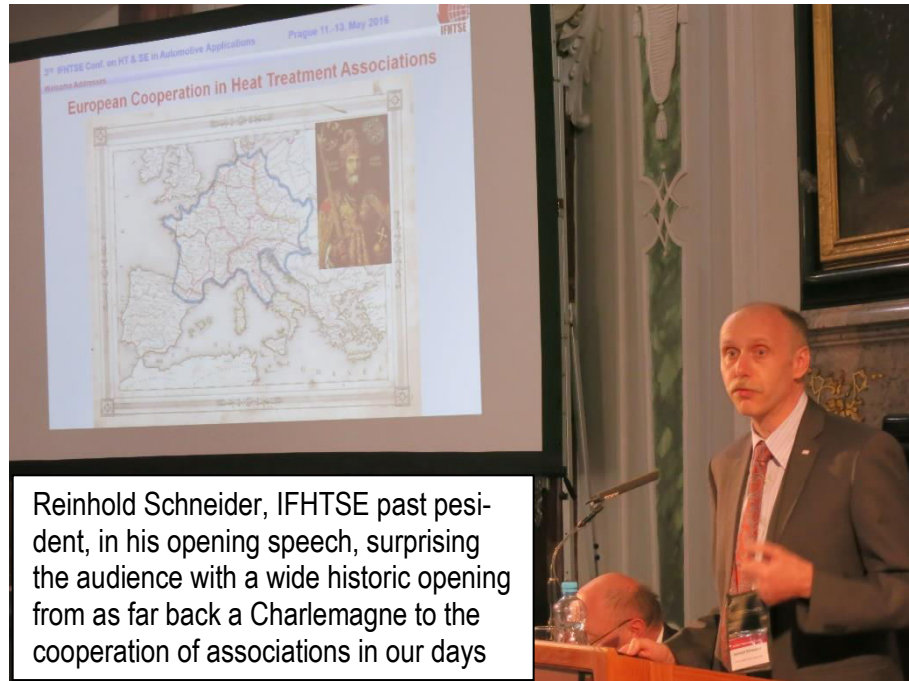


The beautiful hall in Břevnov Monastery

There were many papers of interest.

One interesting paper by P.F.Cardey, of CETIM, France, was a discussion of various specifications used for heat treatment. A heat treating specification written in France, the RQP1, through collaboration with captive and commercial

heat treaters resulted in the French Standard NF A 02-053. A new working group is creating a draft of a new ISO standard, based on NF A 02-053, in order to gather together the various international specifications, including the CQI-9.



Reinhold Schneider, IFHTSE past president, in his opening speech, surprising the audience with a wide historic opening from as far back a Charlemagne to the cooperation of associations in our days

A thought-provoking paper was presented by Janusz Kowalewski (Ipsen) on "Ten New Trends in Heat Treatment and Quenching". He investigated some global trends regarding heat treatment. One trend is that the demand for heat



Hans-Werner Zoch of IWT, Bremen, giving an overview of the latest trends in research

treatment services and equipment is expanding at a higher rate (2-4%) than the rest of the economy (0.5-1.5%). There is an increasing amount of vacuum technology in the use of automotive transmissions. In 2014 approximately 20% of gears in transmissions are heat treated by LPGC. In 2019, it is expected that 40% of

transmission gears will be LPGC. There will be increased globalization of procedures, practices and standards. This includes AMS, ISO and other standards.



Congratulations to the new IFHTSE fellow Thomas Lübben from IFHTSE president Patrick Jacquot

Several papers examined the effects of cryogenic thermal processing on Aluminum-Bronze, Tool Steels and Carburizing grades.

A new gas process of low pressure carbonitriding is developed by the German Institute of Karlsruhe using methy and dimethy-lamine instead of ammonia, with increased carbon and nitrogen uptake of the steel surface.

Distortion of gears and parts is always a large topic. Thomas Lübben provided practical examples of distortion mitigation and control of distortion in

heat treated components. Lübben was also awarded the IFHTSE Fellow award, sponsored by Houghton International.

LPGC was extensively discussed by furnace manufacturers and users. G. Plicht (Air Products) discussed methods of achieving accelerated gas carburizing by using a plasma gas injector. Intergranular oxidation is avoided by oxide-free carburizing in sealed-quench and pit furnaces.



The famous Prague ham was the backbone of the delicious conference dinner



IFHTSE Secretary General Stefan Hock giving his welcoming address at the conference dinner

A new concept and unique in-line vacuum carburizing furnace and gas quenching furnace was discussed by M. Korecki of SECO\Warwick. This equipment would allow hand-free operation of the vacuum heat treatment and carburizer, and allow the placement of the furnace equipment directly in-line on the shop floor. This system fully meets the criteria of a single-piece flow method and utilizes a proprietary arrangement



A warm welcome from a competent team

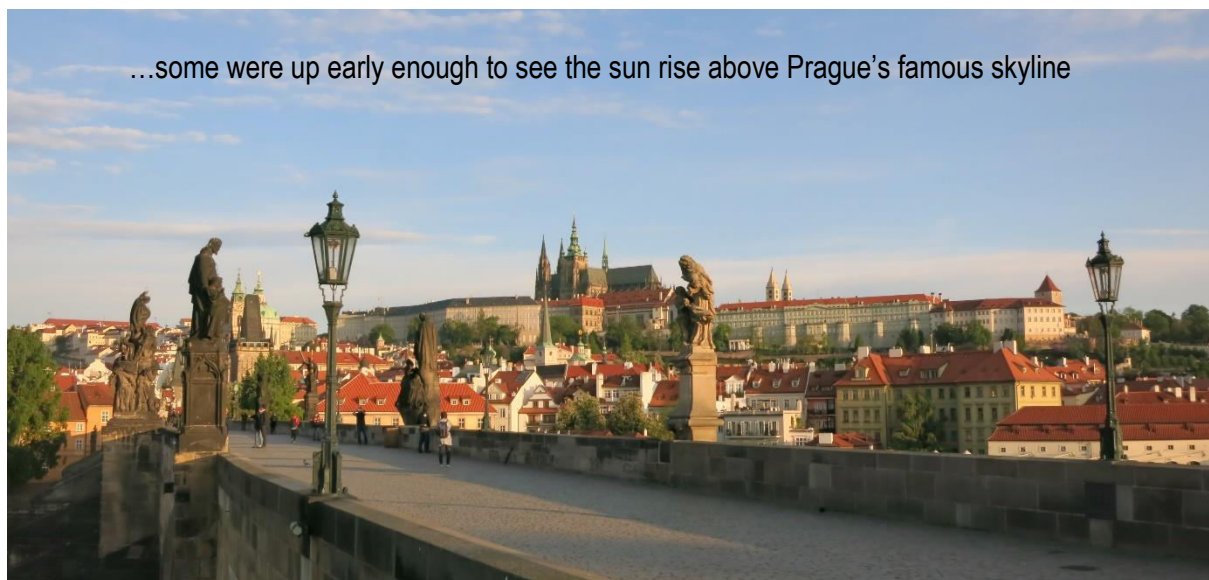
of cooling nozzles that surround the part and ensures a uniform flow of cooling gas from all sides and a table spins the part further enhancing quench uniformity. The system allows to achieve quenching results comparable to oil quenching. Because the cooling nozzles can be adjusted to exactly fit the gears precise size, quenching is optimized and distortion significantly decreased.



Herwig Altena congratulating Maximilian Walter for the Aichelung Young Speakers Award

The newly founded Aichelin Young Speaker Award was given to Maximilian Walter of Ruhr-Universität Bochum, Germany, for his talk "An Investigation of the Tribological Behavior of High-Speed Tool Steels at Elevated Temperature." This award is worth 1500 EUR.

Poster Awards, sponsored by the Burgdorf GmbH & Co.KG, were made for the three best posters (the first EUR 800, the second EUR 500, the third EUR 300), as judged by an independent panel of experts.



Finally, a tour was given to the Skoda Auto Works producing 2000 gear boxes/day. This great tour, included a guided tour of the hardening shop, quick and automatic transfer to a quench press station after LP carburising, as well as the numerous automated vacuum ALD furnaces for low pressure carburizing and helium high pressure quenching transmissions. The transmission assembly area was also toured.

The next IFHTSE events are the 3rd Mediterranean Conference on Heat Treatment and Surface Engineering, Portoroz, Slovenia, 26-28 September 2016 and the 10th Int. Tooling Conference. Bratislava, Slovakia, 4.-7 October 2016.

*Report from Scott Mackenzie, IFHTSE Vice President, Pictures: Stefan Hock*

# Forthcoming Conferences

<b>2016</b>	SEP	13-15	<b>10th International Conference «Innovation Technologies of Heat Treatment»</b>	Moscow	<b>Russia</b>	<a href="http://www.htexporus.com/conference.html">http://www.htexporus.com/conference.html</a>	
<b>2016</b>	SEP	20-23	<b>Heat Treat Mexico</b>	Queretaro	<b>Mexico</b>	<a href="http://www.asminternational.org/web/htmexico">http://www.asminternational.org/web/htmexico</a>	
<b>2016</b>	SEP	26-28	<b>3rd Mediterranean Conference on Heat Treatment and Surface Engineering</b>	Portorož	<b>Slovenia</b>	<a href="http://mchtse2016.com/">http://mchtse2016.com/</a>	
<b>2016</b>	OCT	04-07	<b>International Tooling Conference</b>	Bratislava	<b>Slovakia</b>	<a href="http://www.tool2016.org">www.tool2016.org</a>	
<b>2016</b>	OCT	26-28	<b>HK 2016 [languages: German/English]</b>	Cologne	<b>Germany</b>	<a href="http://www.awt-online.org/haertereikongres">http://www.awt-online.org/haertereikongres</a>	
<b>2016</b>	Nov	12-14	<b>5th Asian Conference on Heat Treatment and Surface Engineering</b>	Hangzhou	<b>China</b>	<a href="http://www.5achtse.org">http://www.5achtse.org</a>	
<b>2017</b>	JUN	26-29	<b>24th IFHTSE Congress / European Conference on Heat Treatment</b>	Nice	<b>France</b>	<a href="http://www.ifhtse-a3ts-nice2017.com">www.ifhtse-a3ts-nice2017.com</a>	
<b>2018</b>	APR	12-13	<b>European Conference on Heat Treatment</b>	Friedrichshafen	<b>Germany</b>		
<b>2018</b>	AUTUMN		<b>International Conference on Quenching and Distortion Engineering</b>		<b>Japan</b>		