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ATZ live

**NEW DIESEL, GAS AND
DUAL-FUEL ENGINES**

Working Process and
Design Concepts

COMPLETE SYSTEM OPTIMIZATION

Engine and Component Design

EMISSION REDUCTION

Fuels and Exhaust
Aftertreatment Systems

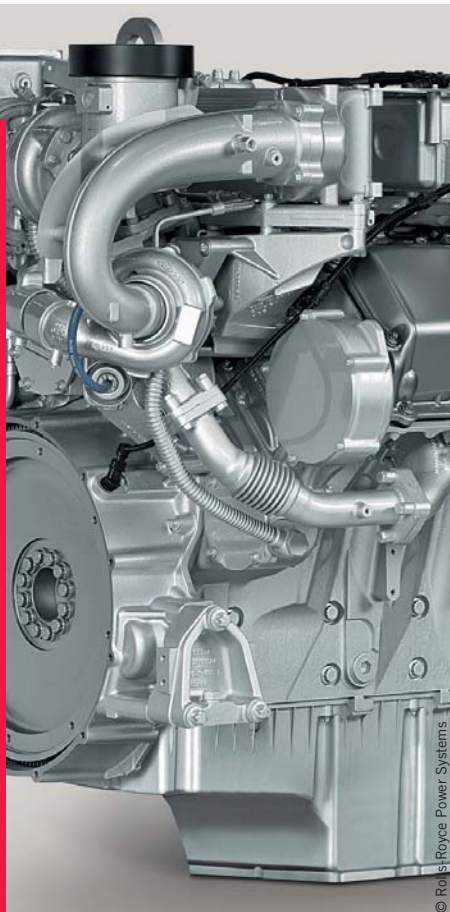
/// KEYNOTE LECTURE

Dr. Wolfgang Östreicher

Winterthur Gas & Diesel Ltd.

/// TOUR

Technik MUSEUM SPEYER



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Simultaneous Interpreting
German and English

Heavy-Duty, On- and Off-Highway Engines

Sustainable concepts put to the test

10th International MTZ Conference

24 and 25 November 2015 | Speyer | Germany



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WELCOME

Recent years have seen a continuous increase in pressure on the manufacturers of heavy-duty engines and their components. They have to fulfill increasingly high power output requirements while at the same time achieving further reductions in fuel consumption and emissions. New concepts are required in order to respond to challenges that are often mutually conflicting.

“Sustainable concepts put to the test” is therefore the motto of this year’s two-day MTZ conference “Heavy-Duty, On- and Off-Highway Engines”. This international discussion forum for all designers and developers of heavy-duty engines for the on- and off-highway sectors and for marine and stationary applications is already taking place for the tenth time.

This year’s conference will focus on new engine concepts and engine components, fuel injection, engine and system optimization, emission reduction, and waste heat recovery. This successful international conference therefore offers you an ideal platform to acquire comprehensive information on the very latest technical developments and to discuss them with other experts. The program is rounded off by a parallel exhibition.

Please take this opportunity to expand your network and make valuable contacts. In particular, the evening event with its relaxed atmosphere will also offer numerous possibilities for this.

I look forward to welcoming you to the conference.

On behalf of the Scientific Advisory Board

Wolfgang Siebenpfeiffer
Editor-in-Charge ATZ | MTZ | ATZelektronik



Media Partners

MTZ **ATZ** offhighway **MTZ** industrial

PROGRAM

TUESDAY 24 NOVEMBER 2015

Moderator: Dr. Ioannis Vlaskos, Director – Engines Business Unit,
Global Market Sector Director – Marine, Ricardo Deutschland GmbH

- 8:45 **Welcome and opening of the conference**
Dr. Alexander Heintzel, Editor-in-Chief ATZ | MTZ Group;
Dr. Robert Hentschel, Managing Director,
Ricardo Deutschland GmbH
- 9:00 **Keynote lecture I Alternative fuels for large diesel engines –
development of low-pressure 2-stroke gas engines for
deep sea shipping**
Dr. Wolfgang Östreicher, General Manager Engineering,
Winterthur Gas & Diesel Ltd., Switzerland

NEW ENGINES

- 9:30 **MAN 175 – the new high-speed engine generation
from MAN Diesel & Turbo**
Maximilian Eder, Product Engineer, W. Bauder, T. Seidl,
MAN Diesel & Turbo SE
- 10:00 **The less, the better. The next generation of MTU's S4000
engines complies with EPA Tier 4f without aftertreatment**
Steffen Harscher, Senior Project Manager Development
S4000-05, MTU Friedrichshafen GmbH
- 10:30 Refreshment break with coffee and tea in the exhibition area

NEW ENGINES AND COMPONENTS

- 11:00 **From street to field – development of the first load-bearing
tractor engine with 13 liters capacity**
Dr. Sergiy Fedotov, Development Coordination, M. Stinzing,
H. Sauter, U. Boehme, C. Sippl, MAN Truck & Bus AG
- 11:30 **Requirements, design and validation of highly utilized
off-highway engines with high power density using
the example of DEUTZ engines TTCD 6.1 and TTCD 7.8
with dual-stage turbocharging**
Dr. Jörg Thiemann, Head of Mechanic Testing, W. Feuser,
DEUTZ AG
- 12:00 **Media / modular filter element concept for a fuel filter
with water separation**
Matthias Gänswain, Innovation Management Fluid Filter
Systems, J. Schätzle, MAHLE Filtersysteme GmbH
- 12:30 Lunch in the exhibition area

Moderator: Dr. Hans-Otto Herrmann,
Director Performance & Emissions, Chief Engineer GATS, Daimler AG

MOBILE GAS ENGINES

- 14:00 **Combustion concepts for commercial gas engines with highest efficiencies**
Anton Arnberger, Development Engineer Commercial Engines,
J. Andersen, K. Wieser, H. Schreier, AVL List GmbH, Austria
- 14:30 **Development and investigation of a gas engine for agricultural machinery**
Sascha Prehn, Research Assistant, Dr. V. Wichmann,
Prof. Dr. H. Harndorf, Institute of Piston Machines and
Internal Combustion Engines (LKV), University of Rostock
- 15:00 Refreshment break with coffee and tea in the exhibition area

STATIONARY GAS ENGINES

- 15:30 **Gas conversion of existing diesel engines: concept evaluation, engine process and gas exchange simulation, design modifications**
Dr. Franz Koch, Project Director Large Engines, C. Hörter,
J. Majer, Dr. I. Vlaskos, Ricardo Deutschland GmbH;
B. Rogers, Ricardo UK Ltd
- 16:00 **Development of a lean-burn combustion system for a large-bore gas engine using a single-cylinder research engine**
Enrico Drehobl, Development Engineer Thermodynamics,
S. Palaveev, J. Schelle, T. Maier, C. Drexel, M. Veltman,
M. Klinkner, Caterpillar Energy Solutions GmbH
- 16:30 **Improved transient performance of type 6 GE Jenbacher gas engines**
Francisco Lopez Gutierrez, Mixture Preparation Engineer,
Performance Team, M. Graus, Dr. N. Spyra, H. Schaumberger,
GE Jenbacher GmbH & Co OG, Austria

-
- 17:15 **Guided tours of Technik MUSEUM SPEYER**
Experience Europe's biggest aerospace exhibition
and further attractions.
-

- 19:30 **Evening of encounters at the Historical Museum of the Palatinate Speyer**
Enjoy a delightful evening and interesting conversations
over dinner with colleagues and speakers.

PROGRAM

WEDNESDAY 25 NOVEMBER 2015

Moderator: Prof. Dr. Peter Eilts, Director of the Institute of Internal Combustion Engines (ivb), TU Braunschweig

FUEL INJECTION

8:30 **Trends for injection pressure in large-bore engines**
Hartmut Schneider, Senior Manager Advanced Development,
Dr. M. Willmann, Dr. R.-M. Schmidt, L'Orange GmbH

9:00 **The Liebherr common rail injection system platform for heavy-duty applications – LCRP 11.5, 11.6 / LCRI S3.13**
Dr. Edgar Bignon, Head of Design Department Common Rail Systems, R. Pirkel, T. Kaemmerlen, S. Stinghe, W. Hampel,
Dr. B. Beguin, Liebherr Machines Bulle SA, Switzerland

9:30 **Continuous development of common rail injection technology for medium-speed 4-stroke diesel engines**
Johann Wloka, Project Manager Injection Systems R&D,
T. Klaua, A. Weber, S. Kern, A. Hauschild, W. Wagner,
L. Maier, MAN Diesel & Turbo SE

10:00 Refreshment break with coffee and tea in the exhibition area

ENGINE AND SYSTEM OPTIMIZATION

10:30 **Investigations to reduce CO₂ emissions for maritime applications**
Olaf Brüning, Deputy Department Manager Commercial, Industrial and Large Engines, Dr. V. Rajamani, H. Petry,
Dr. U. Schlemmer-Kelling, FEV GmbH

11:00 **A new approach for combustion modeling of large dual-fuel engines**
Markus Krenn, Team Leader Advanced Modeling,
Dr. C. Redtenbacher, Dr. G. Pirker, Prof. Dr. A. Wimmer,
LEC GmbH, Austria

11:30 **One-dimensional airborne acoustic development of EU6 emission level heavy-duty box-type truck muffler**
Caner Harman, PD Engineer, A. Y. Cakmak, K. Özdemir,
B. Bayram, A. Tekeli, Ford Otosan, Turkey

12:00 Lunch in the exhibition area

Moderator: Dr. Michael Krüger, Senior Vice President Diesel Systems, Engineering Powertrain Technologies and Worldwide Test Center, Robert Bosch GmbH

EMISSION REDUCTION

- 13:00 **DEUTZ technology portfolio to comply with EU emission stage V for non-road mobile machinery**
Dr. Markus Müller, Head of System Integration, DEUTZ AG
- 13:30 **Transient simulation of nitrogen oxide emissions on diesel engines**
Benjamin Kaal, OD/1D Simulation, Dr. M. Grill, Prof. Dr. M. Bargende, Research Institute of Automotive Engineering and Vehicle Engines Stuttgart (FKFS)
- 14:00 Refreshment break with coffee and tea in the exhibition area

WASTE HEAT RECOVERY

- 14:30 **Waste heat recovery – market view for technology leadership**
Daniel Kennel, Director Automotive and Transportation, M. Raimer, S. Kohler, Schlegel und Partner GmbH
- 15:00 **Efficiency potentials of HD powertrains as a function of emissions concept and waste heat recovery**
Oliver Dingel, Technical Specialist Energy Management, T. Töpfer, Dr. J. Seebode, IAV GmbH
- 15:30 **Optimized WHR system layout for highest efficiency and functionality**
Dr. Christian Maisch, Project Manager Corporate Advanced Engineering, R. Müller, R. Dingelstadt, MAHLE International GmbH; F. Schneider, MAHLE GmbH; R. Lutz, K. Irmler, MAHLE Behr GmbH & Co. KG
- 16:00 **Closing remarks**
Prof. Dr. Peter Eilts, Director of the Institute of Internal Combustion Engines (ivb), TU Braunschweig; Wolfgang Siebenpfeiffer, Editor-in-Charge ATZ | MTZ | ATZelektronik



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In the field of large engines, Ricardo has a wide range of experience from research up to support of series programmes. Ricardo provides low-emission, fuel-efficient and powerful drive unit solutions specifically tailored to markets around the world and has also developed a wide range of solutions for exhaust aftertreatment to meet European, Japanese and US legislation, and also low-cost solutions for emerging markets.

Ricardo delivers concept development, simulation, design work, combustion process development, application and testing. Our test facilities include more than 30 modern industrial engine test beds for heavy-duty and large engines enabling us to develop the next generation of low-emission and fuel-efficient engines for commercial vehicles

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PARTICIPANTS

The MTZ Conference “Heavy-Duty, On- and Off-Highway Engines” is aimed worldwide at experts from engine and vehicle manufacturers in the fields of commercial vehicles, off-highway and marine applications, stationary engines, suppliers and development partners, teaching staff and research assistants from universities, representatives of authorities and associations and engineers active in these fields.

ABOUT THE CONFERENCE

The development of new engines continues to be driven by the important objectives of raising efficiency while at the same time reducing emissions and fuel consumption. This not only calls for innovation concepts and solutions, it also means that the interaction between existing systems and components must be precisely analyzed. This conference focuses on key areas such as new powertrains and components for commercial vehicles, off-highway, marine and stationary applications, fuel injection, engine and system optimization, and solutions for emission reduction and waste heat recovery. The conference examines current and future developments in the field of heavy-duty diesel and gas engines for a wide range of applications. It is an indispensable platform for an international exchange of ideas and experience among experts in heavy-duty engines.

Both days of the conference will offer simultaneous German/English and, if required, English/German interpreting. Please find the German version of the program at www.ATZlive.de or order a copy by telephone on +49 611 7878-132.

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REGISTRATION FEE

€ 1,395.– plus VAT

This includes the conference documentation, coffee breaks, soft drinks, two lunches and the evening reception.

VENUE

Technik MUSEUM SPEYER
“Hangar 10”
Am Technik Museum 1
67346 Speyer | Germany

HOTELS

The hotels have room blocks at reduced prices for the participants. **Please make your reservation by 5 October 2015 (Ibis Styles Speyer and Hotel Goldener Engel) or by 14 October 2015 (Hotel Speyer am Technik Museum) quoting the reference “Heavy Duty”.**

Hotel Speyer am Technik Museum

Am Technik Museum 1
67346 Speyer
Phone +49 6232 6710-0 | Fax +49 6232 6710-20
info@hotel-speyer.de | www.hotel-speyer.de
€ 65.– or € 75.– Single room, includes breakfast

Ibis Styles Speyer

Karl-Leiling-Allee 6
67346 Speyer
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h8668@accor.com | www.accorhotels.com
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Mühlturnstraße 5
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hotel@goldener-engel-speyer.de | www.goldener-engel-speyer.de
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LANGUAGES USED IN THE PRESENTATIONS

German and English with simultaneous interpreting
(German – English / English – German)

CONDITIONS

No cancellation charge is due if registration is cancelled by 26 October 2015. Cancellations made after that date will incur a charge of 35 % of the registration fee. For cancellations made after 2 November 2015 the full registration fee is payable. Cancellations must be made in writing. The date of the postmark will determine whether the deadline has been met. If you are unable to attend, we will be happy to accept a substitute participant.

Should a speaker be unable to attend at short notice by reason of force majeure, illness, accident or other circumstances for which ATZlive cannot be held responsible, another qualified person will be appointed to the exclusion of any claim for compensation. Should the event be cancelled altogether, we will of course refund the registration fee.

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ATZlive

// Spotlight on Powertrain and Vehicle Engineering //

ATZlive organizes its high-caliber conferences for vehicle and engine specialists together with key representatives from research and industry to ensure that they are tailor-made to the needs of the participants and address the very latest issues. Our close collaboration with the editorial teams of our specialist magazines ATZ and MTZ keeps us fully up-to-date on the latest topics and trends on the market.

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CONFERENCE REGISTRATION

Heavy-Duty, On- and Off-Highway Engines

24 and 25 November 2015 | Speyer | Germany

In accordance with the General Terms and Conditions and the price list, I would like to order the following:*

Participation in the conference at a price of € 1,395.– plus VAT

* The General Terms and Conditions of ATZlive apply, as published on the website www.ATZlive.de/AGB

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