



# 6<sup>th</sup> International Exhaust Emissions Symposium

## 14-15 June 2018



# INVITATION

**Trends in automotive emissions legislation: impact on LD engine development, fuels, lubricants, and test methods – a global view, with a focus on WLTP and RDE regulations**

### Media patronage:

Combustion Engines Journal published by PTNSS (Polish Scientific Society of Combustion Engines) and DieselNet (Canada)



## DieselNet

#### Organisers:

BOSMAL Automotive Research and Development Institute Ltd  
93 Sarni Stok  
43-300 Bielsko-Biała  
Poland

Polish Scientific Society of Combustion Engines (PTNSS)  
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Notwithstanding decades of improvement in the industry, concern over the impact of vehicles on air quality remains high. Emissions of greenhouse gases from road vehicles remain very high on the political agenda; emissions of particulate matter (PM and especially PN) remain under scrutiny. Certain as-yet unregulated gaseous emissions also represent potential air quality risks. The issue of emissions (and fuel consumption) occurring under real driving conditions (RDE) has risen to become a top priority for the automotive sector, particularly in the EU and the USA. Furthermore, real driving emissions have increased in importance to the point where RDE-PEMS measurements are now an integral part of the emissions testing process, yet these procedures are not static and will continue to evolve. Another important step ahead in emissions regulation tightening is the introduction of the new world-wide harmonised test procedure (WLTP). Both new regulations: WLTP and RDE and their impact on vehicle engine technology are the hottest topics in the emissions reduction field.

Continuing scrutiny of particulate emissions from engine types other than Diesel represents a somewhat new and challenging direction in emissions testing and control. The roll-out of GPFs has begun and these devices have their own associated research needs. These factors exert massive pressure on vehicle and engine manufacturers (both light duty and heavy duty), their suppliers and the oil and fuel industries. Other, allied fields such as R&D and fuel additive and lubricant suppliers also find themselves subject to the same forces. Many of the aforementioned problems are shared by the various stands of the industry – passenger car and light commercial vehicle/heavy duty/off road/marine – and many of the proposed strategies and technical solutions have multi-segment applicability.

However, the market is dictated not only by political and technical factors, but also by consumer demands, which are themselves also evolving. Technical developments in one region rarely occur in isolation, due to the omnipresence of the internet and the resulting ease of information-sharing – in many senses, the world is becoming a smaller place. Many lower-income countries are closely watching developments in the EU and USA, eager to solve their own problems with urban air quality in a cost-effective manner. Both legislators and the general public have the goal of reducing fuel consumption, without any sacrifices in terms of durability or safety. The fuel consumption/emissions trade-off is of paramount importance in such discussions.

Increased media focus on the emissions performance of modern vehicles (particularly – but not exclusively – Diesels) is also increasing public pressure. While most human activities contribute to emissions of greenhouse gases and harmful emissions, the automotive sector is a highly visible contributor and an obvious target for legislators.

Responding to this, a broad range of advanced engine technologies, catalytic aftertreatment systems, revised fuel types, bespoke lubricants and friction inhibitors, etc. have been introduced. These strategies are often interrelated: low sulphur fuel is required for aftertreatment system compatibility; advanced engine design has impacts on required lubricant properties, etc. Fundamental changes to the propulsion strategy for road vehicles (e.g. alternative fuels; the implementation of advanced electromechanical systems – hybrids; the gradual convergence of gasoline and Diesel engines) represent an ongoing revolution in the industry. Requirements that regulated emissions are below a certain level under virtually all operating conditions may yet force certain technologies off the market, or at least require significant modifications. All these new or revised technologies must be developed, tested, approved and certified – and not only in the laboratory.

Mindful of the above points, and with a proven track record of organising scientific meetings, BOSMAL & PTNSS are pleased to announce their 6th International Exhaust Emissions Symposium, to be held on 14-15 June 2018 in Bielsko-Biała (Poland). The event shall build upon the successes of previous symposia, but will include the very latest developments in the aforementioned fields and their implications for industry, the environment and beyond. Through the formation of business and personal relationships – and the potential for information sharing and collaboration that results – the various branches of the industry can advance together towards their goals. This invitation, cordially extended to you, represents our desire for you to participate in what promises to be another highly successful scientific meeting hosted at BOSMAL. We look forward to hosting you.

**Dr. Piotr Bielaczyc**  
*Chairman of the International Organising Committee*

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## International Organising Committee

- **Dr. Piotr Bielaczyc** - Chairman - BOSMAL, Poland
- **Wolfgang Thiel** - Vice-Chairman - TRT, Germany
- **Arkadiusz Waclawek** - Coordinator - BOSMAL, Poland
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- **Marta Kosakowska-Boda** - BOSMAL, Poland
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- **Dr. Amanda Lea-Langton** - University of Manchester, UK
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- **Dr. Piotr Pajdowski** - BOSMAL, Poland
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- **Dr. Thomas Wallner** - Argonne National Lab, USA
- **Klaudiusz Waniółka** - BOSMAL, Poland
- **Joseph Woodburn** - BOSMAL, Poland

## Main topics of the Symposium

- Emissions legislation - for all jurisdictions
- WLTP - and RDE-focused R&D test methods
- Fuel economy in light of Euro 6d, WLTP and RDE
- New methods of PM testing
- Compounds which are potential candidates for emissions regulation
- Emissions test equipment (including PEMS)
- Emissions reduction technology
- Aftertreatment systems, technologies and strategies
- Emissions simulation
- Powertrain development and electrification
- IC Engine test method development
- Vehicular fuel development
- Alternative fuels, fuel additives and fuel blends
- Gaseous fuels: CNG & LPG
- Engine oil development
- Commercial vehicles, discussion of other automotive sectors: synergies and shared challenges/solutions

## Participation – key information

- Participation in the Symposium and the Symposium Dinner is payable. The fee varies with the scope of participation, as well as the date of registration and bank transfer
- Registration is possible only by completing the registration form
- For more information see the event website

## Please address any organisational questions to:

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DieselNet will include a detailed report of the Symposium and Combustion Engines Journal will publish a symposium summary, the abstracts and the full Symposium Proceedings on CDROM, together with movie reportage on DVD.

## Venue

BOSMAL Automotive Research and Development Institute Ltd  
Sarni Stok 93  
43-300 Bielsko-Biała  
Poland

## Accommodation, recommended hotel

Parkhotel Vienna  
48 Bystrza ska  
43-309 Bielsko-Biała  
tel.: +48 33 496 62 67  
mobile: +48 608 075 004  
e-mail: marketing@vienna.pl  
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## Symposium Dinner

Parkhotel Vienna  
48 Bystrza ska  
43-309 Bielsko-Biała  
tel.: +48 33 496 62 00  
www.vienna.pl

## Symposium language

English

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