

automotive testingexpo2012 INDIA

6, 7, 8 March 2012

The Chennai Trade Centre, Chennai, India

**FREE
TO ATTEND!**

TECHNOLOGY WORKSHOP PROGRAMME

India's **NEW** Automotive Testing, Evaluation
and Quality Engineering Trade Fair



Register online **NOW** to receive your **FREE**
visitor pass/badge and avoid delays at registration!

OUR KNOWLEDGE PARTNER IS



www.testing-expoindia.com



FREE TO ATTEND!

automotive
testing EXPO 2012
INDIA

HIGHLY FOCUSED TECHNOLOGY WORKSHOP PROGRAMME

TUESDAY 6 MARCH 2012

10.30 – 11.30 Honeywell Sensing and Control

Brian Duffy, global application engineering manager

Effectively using torque sensors with today's data acquisition systems

The focus will be on the importance of utilising high-quality torque sensors, including the correct design, selection and installation for the application, which is critical to ensuring data integrity for the measurement system. Covered in detail will be the following:

- An overview of sensing technology for torque sensors. This will cover a basic understanding of the specially designed sensing elements/structures. Both reaction and rotary torque sensors will be discussed.

- The specific benefits of test validation and low test error by utilising torque sensors in demanding automotive test and measurement applications, of which five categories will be covered:

1. Assembly and testing
2. Component testing
3. Powertrain testing
4. Vehicle and proving ground testing
5. Motorsports applications

These will also include case studies.

- The value to the customer of utilising quality outputs from sensors, combined with ease of connectivity and setup to modern data acquisition systems, which includes plug-and-play capabilities.

12.00 – 13.00 Brüel & Kjær Sound and Vibration Measurement AS Denmark

Erik Ziegler, product manager - Production Test System

NVH Testing

The growing demand for passenger cars, trucks, motorcycles, buses and trains to be more pleasant and exciting to drive or ride while emitting less noise into the environment makes noise and vibration harshness a key differentiator for vehicle manufacturers.

An efficient NVH development process is key to competitive advantage. Based on a combination of a large number of consumer-driven projects and superior knowledge of the industry, Brüel & Kjær covers the whole vehicle NVH process from target setting to production test.

Brüel & Kjær has been a proven world leader in sound and vibration measurement for over 70 years.

Honeywell

By offering both hardware and software, our products make measuring easier, faster and better, saving time while ensuring accurate results. Through worldwide sales and service centres offering local application and technical support, Brüel & Kjær provides complete measurement solutions.

Based on a combination of a large number of consumer-driven development projects and superior knowledge of the industry, Brüel & Kjær covers the whole vehicle NVH development process – from vehicle NVH simulators for target setting to spherical beamforming solutions for 360° noise mapping.

14.00 – 15.00 MOOG

Dong Yan, automotive test application manager

Expand the realm of automotive testing using Moog's versatile test systems

User-friendly, flexible and tailored systems expand the realm of automotive testing. Cutting-edge expertise and a collaborative approach are the keys to rapid, reliable and versatile testing to improve competitiveness.

This presentation introduces you to products that support single to multi-axis tests and test systems such as four-post, simulation table (6 DOF), ride and comfort, driving simulator and human-in-the-loop testing.

The session also features the Moog Integrated Test Suite with a unique architecture and extra modules to accommodate additional test requirements as operator expertise grows. The Moog expert will also focus on new test controllers tailor-made for smaller, yet complex tests on components, materials and vehicles. Additionally, you will learn about Moog's innovative electric test solutions that allow for clean and cost-effective testing.

MOOG

15.30 – 16.30 MTS Systems Corporation

Steven R. Haeg, principal staff design engineer

Streamlining development processes with laboratory-based durability & performance testing

This presentation explores innovative tools and techniques recently developed for laboratory-based ground vehicle durability and performance testing and simulation. Central to this exploration will be a discussion of hybrid simulation – the integration of virtual models with physical test systems. Combining these technologies enables laboratory simulations of components and systems well before complete prototypes are available for proving ground operation and data acquisition. This allows valid physical testing of components and systems much sooner in the development cycle, effectively maximising test efficiency and streamlining the overall development process. Examples of how hybrid simulation can be applied to both ride and handling and durability testing will be included. Additional presentation topics will include an examination of new systems for durability testing of heavy trucks, as well as examples of laboratory-based durability and performance testing innovations for other large vehicles and structures.

MTS

Register online **FREE!** www.testing-expoindia.com

10.30 – 12.00 Partnership of TRL, Olympus and Xcitex**Mark Riddell, (TRL), group manager - Product Testing Division****Jonathan Hatton, (Olympus), international sales and marketing manager i-SPEED****Peter Carellas, (Xcitex), president & CEO****Impact testing, visualisation and motion analysis (Incorporating booth tour.)**

The presentation will introduce the dynamic tripartite partnership of TRL, Olympus and Xcitex, and how these companies combine to provide a complete solution to the customer wanting to establish impact testing facilities. Each company will provide an overview of the relative merits of their own products where they have unique industry expertise: sled design and construction from TRL, high-speed video cameras and imaging from Olympus and motion-analysis software from Xcitex.

Following the short presentation, attendees will be invited to the TRL / Olympus / Xcitex stand where a live sled impact test will take place. Attendees will have the opportunity to view the quality of sled construction, witness the sled in action, immediately review the event in slow motion and perform detailed motion analysis. The live demonstration will be supported by the distribution of a record of the event and analysis on digital media as comprehensive reference material.

12.30 – 13.30 Ansys Software Private Limited**Sandeep Shetty, technology specialist****Testing and engineering simulation as connected processes to gain product insights**

The Ansys presentation will demonstrate how engineering software simulation tools complement physical testing through various application examples within the automotive domain. The talk will also emphasise how testing data can be used in simulation to get insight into components and subsystems. This will enable designers to make more informed design decisions, thereby reducing time and cost to market without compromising product integrity and sustainability for innovative products.

14.00 – 15.00 Horiba India Private Limited**Shinichi Murakami, emission measurement specialist****Real-time total sulphur analysis with UVF method for oil consumption measurement**

In recent years much attention has been paid to oil consumption of vehicles, because it is closely related to fuel consumption. To achieve low fuel consumption, it is also important to measure and optimise oil consumption. For oil consumption measurement, a sulphur tracing method that measures the sulphur components exhausted from an engine has been investigated as an alternative method. In this method, high-sensitivity measurement of total sulphur emission is required, because sulphur concentration in vehicle exhaust is usually 0 ppm to 2 ppm.

Horiba MEXA-1170SX uses ultraviolet fluorescence (UVF) detection. The presentation will show how this analyser measures three different categories of sulphur: SO₂, TRS (Total Reduced Sulphur), and TS (Total Sulphur). The simultaneous measurement of SO₂ and TRS in the rear point of the catalyst is considered to be useful to investigate sulphur trapping and de-sulphating on the catalyst, which is related to sulphur poisoning. The TS measurement by the UVF analyser is considered to be applicable to oil consumption testing with the

sulphur tracing method, because it has high sensitivity and quick response.

Dr Stefan Bender, general manager product line ECP**Chassis dynamometer for exhaust emission application measurement**

Horiba has many years of experience of supplying emission standard chassis dynamometers to the automotive industry and legislative bodies around the world. The latest generation of Horiba dynamometers – VULCAN – is the outcome of such rigorous research. They present the highest level of performance to date, built on a robust and modular design. Key features include accuracy, reliability and modular design.

Horiba dynamometers are exclusively used in emission measurement, fuel economy, endurance and performance measurements, with climatic condition measurement as well.

The key highlights of the present system include:

- Compact design, easy handling and positioning
- Error-free operation, auto locking
- Pedal operation
- Compensation of static vertical forces
- Minimised aerodynamic influence, compact design pillars
- Integrated rail system

The presentation will give an insight into the depth of the system, covering all key features along with detailed application.

Andrew Keay, sales support and marketing manager**Application of fuel flow meter for fuel consumption measurement**

Accurate fuel flow measurement is becoming an increasingly important topic as the pressure to minimise fuel consumption increases. This presentation examines the design and construction of a range of fuel meters designed to meet the exacting needs of the automotive market. Details of the way in which the measurement objective was set for the development are presented, and the principles of the flow measurement are detailed. The extensive range of instrument interfaces is also discussed along with the key operating modes of the instrument. Finally, the important topics of measurement plausibility checking and calibration checks are shown and the extent to which the design minimises user-generated errors discussed.

15.30 – 16.30 Dynaspede Integrated Systems Private Limited**Mr Gurumurthy, chief operating officer****Advances in transmission testing**

Growing demand for urban and rural transportation combined with rising economic prosperity has propelled the emergence of modern vehicles in India. In today's competitive market scenario, product quality has become a key differentiator for the entire spectrum of vehicles. Customer demands for high quality have necessitated end-of-production line testing, which guarantees sustainability of quality of the transmissions rolling out of the production line. Although this type of testing has been around for a long time, in recent years it has become increasingly sophisticated and demanding.

The synchromesh behaviour, gear shift force quality studies for the manual gearbox and NVH testing are

growing in significance as a variety of manufacturing and assembly faults often result in unacceptable gear shift quality, noise and vibration levels.

Dynaspede will be presenting the advances in transmission testing for durability, EOL performance studies and testbed engineering concepts to meet the demanding requirements with sophisticated yet cost-effective solutions.

THURSDAY 8 MARCH 2012

10.30 – 11.30 ETAS Automotive India Private Limited

Lars Schaefer, *project manager*

ETAS vehicle simulator: one system – many possibilities

The ETAS vehicle simulator is a versatile HiL system to simulate a complete vehicle environment in closed loop. It is typically used for system-level integration of powertrain, chassis, body and hybrid ECUs. The vehicle simulator can either provide the I/O hardware and plant models for a particular ECU or simulate the respective ECU, if it is not physically connected to the system.

The main focus of a vehicle simulator is validation of system-level functions. This includes network testing on CAN, LIN and FlexRay as well as diagnostic testing. For diagnostic testing, faults have to be introduced into the system, which is often very difficult or even dangerous on a real vehicle because components are not accessible or the system might respond unexpectedly.

An ETAS vehicle simulator is extremely flexible. By simply changing the parameterisation of the plant models and exchanging some hardware loads, the vehicle simulator can be turned from one virtual vehicle into another.

12.00 – 13.00 MCE Stahl und Maschinenbau GmbH & Co KG

Klaus Bernkopf, *business line manager Test Facilities / Entire Systems*

Project management of automotive test facilities with special focus on climatic wind tunnels.

The presentation deals with the advantages of a general contractor for highly sophisticated facilities such as climatic wind tunnels or similar.

MCE provides wind tunnels and other test facilities for its clients as a turnkey supplier, together with its partners including experts in the design of such facilities or local partners for special markets.

The client need not worry about any interfaces between the single systems, and can rely on the project management experience of the general contractor in combination with the technical expertise of the wind tunnel technologist.

We are happy to involve the customer very closely in the process from the very beginning of the definition of needs until the successful handover of the entire facility.

The presentation will outline the main questions raised by the customer when thinking about a general contractor approach:

What are the advantages for the customer of choosing a general contractor?

What is the complexity of an entire wind tunnel project to legitimise a general contractor?

What is the special know-how of MCE to qualify it as a general contractor of such projects?

*This program may be subject to change

EXHIBITOR LIST (AS OF 13.01.2012)

Accurate Technologies Inc. (ATI) • Accurate Test Equipment & Engineers • Adams Technologies Pvt Limited • Agilent Technologies Hong Kong Limited • AICON 3D Systems GmbH • Ajmil Ltd • ANSYS Software Pvt Ltd • AOS Technologies AG • API Com SRL • ARIES Ingenieria Y Sistemas • Ascott Analytical Equipment Limited • ATEQ India • Atlas Material Testing Technology GmbH • Automotive Research Association of India (ARAI) • Automotive Test Systems • Automotive Test Systems • Automotive Testing Expo India • Automotive Testing Technology International • AVL List GmbH • BEDA Flow Systems Pvt. Ltd • BISS Research • Blum-Novotest GmbH • Bruel + Kjaer - Josts • Captronic Systems Pvt Ltd • CFM Schiller GmbH • CM Envirosystems Pvt Ltd • Complus Systems Pvt Ltd • Control-Tec, LLC • CSM GmbH • D & M Technologies • Data Physics Corp • Dearborn Electronics India • Defiance Technologies • Drew Technologies • DTS, Inc • DynaFusion Technologies PVT Ltd • Dynaspede Integrated Systems Pvt Ltd • EASI Engineering • ECON Technologies Co Ltd • EM Test • ETAS Automotive India Ltd • ETS Lindgren • ETS Solutions • FAIST Anlagenbau GmbH • FARO Business Technologies India Pvt Ltd • Froude Hofmann Ltd • Futura Apsol Private Limited • gfall tech GmbH • Globetek • GÖPEL • electronic GmbH • HBM • Head Acoustics • Honeywell Sensing and Control • Horiba India Pvt Ltd • Hoyoung Engineering Co Ltd • IAC • IDIADA Automotive Technology SA • Instron Structural Testing Systems GmbH • Integrated Process Systems • InterTech Development Company • Intertek India Private Ltd • Intrepid Control Systems Inc • Ipetronik India • Isaac Instruments • JA - Gastechology GmbH • JASH Precision Tools Limited • Josts Engineering Company Limited • Kaleidoscope Engineering Works • Kapolnek GmbH • Kistler Instruments India PTV Ltd • KMT - Kraus Messtechnik & Telemetrie • KNR Systems Inc • LMS International • Machine House (India) Pvt Ltd • MAHA AIP GmbH & Co KG • Mari Aerotech • Master Fire Fighters Pct Ltd • Mechanical Simulation • Mecord Systems and Services Private Ltd • MICRO-EPSILON Messtechnik GmbH • Micrologic Integrated Systems Pvt Ltd • MicroPoise measurement Systems LLC • Microsys Technologies Inc • Minitab Inc • MOOG • MSC Software Corporation India Pvt Ltd • MTS Systems Corp • Muller BBM • Mustang Dynamometer • Nardo Technical Center srl, Prototipo Group • NI Systems India Pvt Ltd • Nikon India Private Limited • OEM Technological Instruments • Olympus KeyMed Group • Optronics GmbH • Orion Test Systems & Automation Inc • ORME • Panatech Asia • Petrochem Carless Ltd • Photron (Europe) Ltd • Polytec GmbH • Pro² • Prufen Systeme Private Limited • PT Instruments Pvt Ltd • Q-Lab Corporation • RA Consulting GmbH • Reckers Control India Pvt Ltd • Reilhofer KG • Renk Test System GmbH • Revolutionary Engineering • RIION Co Ltd • SAJ Test Plant Private Ltd • SAMKRISH • samtec automotive • software & electronics GmbH • Saraswati Dynamics Pvt Ltd • Seattle Safety LLC • Servocontrols & Hydraulics (I) Pvt Ltd • SGS India Pvt. Ltd • Shimadzu Analytical (India) Pvt Ltd • Smart Electronic Development GmbH • Southern Hemisphere Proving Ground (SHPG) • Structural Solutions Private Limited • Structural Solutions Private Limited • Sushma Industries • Tarang Kinetics (P) Ltd • Tekscan Inc • Tesscom Systems India Pvt Ltd • Titan Automation Solutions • Topaz Fire Systems P Ltd • Vector Informatik India Pvt. Ltd • Venture Technologies • Vibration Research Corp • Vibrotech Instruments Pvt Ltd • Visol • Voith Turbo Hochelastische Kupplungen GmbH & Co KG • VTI sl • Welan Technologies • Zen Microsystems

CONTACT DETAILS:

AUTOMOTIVE TESTING EXPO INDIA 2012

Dominic Cundy | UKIP Media & Events Ltd | Abinger House | Church Street | Dorking | Surrey | RH4 1DF | UK

Tel: +44 1306 743744 | Fax: +44 1306 877411

Email: dominic.cundy@ukipme.com

Web: www.testing-expo.com

OUR KNOWLEDGE PARTNER IS



EXHIBITION OPENING TIMES

6 March	10.00hrs – 17.00hrs
7 March	10.00hrs – 17.00hrs
8 March	10.00hrs – 15.00hrs

Register online NOW to receive your **FREE** visitor pass/badge and avoid delays at registration!

Register online **FREE!** www.testing-expoindia.com