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Press Release

Robert Bosch Engineering and Business Solutions Ltd (RBEI) launches Bosch's first ECU Reliability Testing Centre in India

- Reliability testing centre for automotive components in India.
- Reliability tests for Electronic Control Unit (ECU) ensures that Bosch delivers high quality automotive components with respect to local conditions in emerging markets.
- New lab is equipped with the world's best technology to test automotive products according to world wide standards.

Bangalore, August 31, 2009: Robert Bosch Engineering and Business Solutions Ltd (RBEI), the engineering and IT services subsidiary of Bosch in India, has launched the **first-of-its-kind Reliability Testing Centre** that will help enhance the reliability of automotive components like Electronic Control Units (ECU), in varied environmental conditions. The new lab is located besides the Electronic Control Unit production facility of Bosch at Naganathapura, Bangalore.

The launch of the ECU reliability lab comes as a major boost for the Indian automobile industry as it especially addresses requirements from the local market. "This test centre is filling up the last gap in our local product development processes. With the availability of this facility we are now able to develop products for our customers right from the concept stage to the delivery stage, completely localized in India" said **Mr. Friedhelm Pickhard, Managing Director, Robert Bosch Engineering and Business Solutions Ltd.**



August 2009

The content and complexity of electronics in cars have continuously increased in the past 50 years. In automotive electronics, an Electronic Control Unit (**ECU**) is an embedded system that controls one or more of the vehicle subsystems like the powertrain. Some modern cars have up to 80 ECUs, including Engine Management ECUs, Transmission Control Units, Airbag Control Units, electronically driven Window Lifter, etc.

The tests conducted at RBEI, adhere to all relevant International standards like AEC Q100, IEC 60068, ISO 16750, SAE J1879, J2334, VDA Volume 3 etc. These standards define a subset of requirements and tests to ensure the reliability of automotive components.

While the international standards are mainly based on experiences from European, American and Japanese markets, special Indian conditions need to be addressed additionally. Based on the needs of the local emerging markets, the reliability engineers use their technical knowledge for adapting and extending the tests to be performed.

With the local domain expertise the worldwide network of Bosch reliability test engineers will influence the recent standards to cover the local applications for 2- and 3-wheeler, as well as passenger cars and commercial vehicles with respect to the local conditions (like climate, usage of vehicles and different road conditions) in a more suitable manner.

In detail this will be achieved by gathering information on ECUs and the environment they are exposed to. For example, profiles on ECUs' heat dissipation during operation are collected and later simulated during the tests. In the same manner profiles for vibration and spray/corrosion tests are collected as a base for the reliability tests. Based on this information,



BOSCH

August 2009

standard tests are adapted to local conditions and are performed in the RBEI reliability lab. Afterwards detailed analysis of the ECUs is performed to ensure that there is no weak point in the design of the automotive component.

Dr. Detlef Zerfowski, Department Head of the RBEI reliability said, “The RBEI test lab has been set up with the best technology available. With this technology and the knowledge of our engineers, RBEI ensures the world leading quality of Bosch automotive components.”

According to **Mr.Sudhakar Kunte**, VP, Engineering section – RBEI, “Competitive development costs, local engineering expertise, closeness to the local OEMs and availability of Reliability Testing Infrastructure will help us better in understanding local OEM’s needs and serve them better and faster”.

The new lab will begin with ECU testing and is equipped to test other automotive products in future.

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BOSCH

August 2009

About Robert Bosch Engineering and Business Solutions Limited

Robert Bosch Engineering and Business Solutions Limited (RBEI), is a 100% owned subsidiary of Robert Bosch GmbH, offering end to end engineering, IT and Business solutions. With over 5500 associates, we are the largest software development center of Bosch, outside Germany, indicating we are the technology flagship of Bosch in India. Having a global footprint with presence in the USA, Europe and the Asia Pacific region, we have two state-of-the-art facilities in Bangalore, and a second development center in Coimbatore. We provide engineering services such as embedded software and hardware development for: automotive Electronic Control Units, industrial, consumer goods and building technology, Mechanical Design and Simulation services, PCB and semiconductor design, etc. Our non engineering services include IT Services, Process Consulting, Shared Services Accounting/Purchasing/HR, Translation, Documentation and eLearning. We are ISO 9001:2000 certified (1999) and appraised at CMMI-L5 (2006). We are also ISO 27001 certified (2008).

About the Bosch Group

The Bosch Group is a leading global supplier of technology and services. According to provisional figures, some 282,000 associates generated sales of roughly 45 billion euros in the areas of automotive and industrial technology, consumer goods, and building technology in fiscal 2008. The Bosch Group comprises Robert Bosch GmbH and its more than 300 subsidiaries and regional companies in over 60 countries. If its sales and service partners are included, then Bosch is represented in roughly 150 countries.

Additional information can be accessed at www.bosch.com.