PRESS RELEASE

September 23, 2009

Interdisciplinary drive competence in Aachen

MBtech presents new drive solutions for passenger vehicles and aircraft as an exhibitor at the Aachen Colloquium.

From October 5 to 7, 2009 automotive developers from all over the world will meet at the Aachen Colloquium in order to present their latest research and discuss the current challenges facing the branch. MBtech proves to this top-class audience that the innovations of a development and consulting service provider for automotive applications and beyond deliver highly efficient drive systems.

More efficient drive concepts with lower fuel consumption are absolutely essential in order to counteract the worldwide sales crisis in the mobility industry. Which of these concepts is best suited to overcoming the current challenges, will be one of the central issues in the expert discussions at the 18th Aachen Colloquium. Two of the solutions which have already become series applications are on display to visitors at MBtech's EG31 exhibition stand: As exhibits the company presents a purely belt-driven starter generator (rSG) as well as a compact four-cylinder diesel engine for light aircraft. In addition, MBtech also presents its SLK CNG demonstration vehicle: This natural gas powered sports car study is based on a Mercedes-Benz SLK and is available for test drives on a test track.

Series efficiency

The rSG system co-developed and tested by MBtech sets new standards in the automotive sector. The Automatic Start/Stop system is based around a high-performance starter generator and is connected to the crankshaft by means of a belt drive. In contrast to conventional starter generators the system develops a substantially higher generator moment and thus greater belt forces. MBtech's specialists realized a completely redesigned drive belt layout in order to reliably transfer these forces. However, during the rSG project MBtech supported its customer with far more than the systems development, integration and endurance testing. The experts were involved in the decision-making processes and the subsequent supplier selection from the concept development phase onward. While the visitor's interest in Aachen will focus on the detailed solutions implemented in the rSG, the advantages of this start/stop function can already be seen in two gasoline-driven compact vehicle models. The system delivers fuel savings of up

nine percent and correspondingly lower $C0_2$ emissions -along with one major comfort bonus: Thanks to the rSG the engine not only starts faster but also more quietly than with a conventional starter motor.

Economy and higher performance also play a part in the second MBtech exhibit at the Aachen Colloquium: A four-cylinder common rail diesel engine which MBtech developed in collaboration with the aircraft manufacturer, Diamond Aircraft. The compact powerhouse exceeds all of the performance and torque values of the engines installed in propeller aircraft manufactured by Diamond Aircraft - with a reduction in fuel consumption of up to 20%. The compression-ignition engine based on the 2 liter series engine from the Mercedes A-Class can be run on either diesel or kerosene, providing greater flexibility. MBtech provided its customer with expert support up to and including the complex certification process - thus proving that the aerospace industry also stands to profit from MBtech's competencies. Diamond Aircraft has already commenced series production of the engine certified by the European Aviation Safety Agency. It celebrates its premiere in the two-engine DA 42v light plane and it is already a definite part of the plans for two further models from the manufacturer.

Natural gas displays sportsmanship

With the CNG demonstration vehicle MBtech emphasizes its competence as a development partner for alternative drive systems – For combustion technology and vehicle integration. Thanks to its impressive performance characteristics the technology-carrier currently represents the most dynamic interpretation of a natural-gas powered vehicle: It delivers 146 kW, develops a maximum torque of 270 N meters and accelerates from a standstill to 100 km/h in 7.8 seconds. It achieves a maximum speed of 244 km an hour while its CO_2 emission of 150 g per kilometer in the NEDC is on a par with far less powerful middle-class vehicles with gasoline engines. This is the result of numerous technical innovations developed by MBtech itself for the CNG demonstration vehicle: These include the 4+1 injector concept, the natural gas is specific, modular engine control unit known as the $SAVE_{CNG}$ and the compact exhaust system. These solutions can also be transferred to other vehicle applications. Those who wish to convince themselves that the combination of natural gas and driving pleasure will receive unique opportunity at the Aachen Colloquium: MBtech will make unique vehicle available to all of the participants for test drives.

About the MBtech Group

The MBtech Group is an internationally leading automotive engineering and consulting company for the automotive industry. The company has 2700 employees at locations in Europe, North America and Asia. In 2008 the MBtech Group generated a turnover of 360 million euros.

MBtech is distinguished by the tightly meshed development and consulting services covering the entire automotive value chain. The MBtech brand combines all of its products and services into four segments: MBtech vehicle engineering, MBtech powertrain solutions, MBtech electronics solutions and MBtech consulting.

Regardless of whether components, systems or modules, new development, integration or testing are required: MBtech supports automobile manufacturers and suppliers beginning with the detailed specifications, covering the design, calculation and testing onward to series maturity. MBtech combines these engineering competencies with tailored consulting services which enable customers to best utilize their technologies and innovations – and thus achieve clear competitive advantages.

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