Innovations for big engines – KSPG AG at IAA Commercial Vehicles

The IAA Commercial Vehicles was being held in Hannover from September 25 to October 2. KSPG AG was displaying newly developed and innovative components for commercial vehicle engines.

Among the exhibits displayed by this international first-tier supplier on a stand of around 170 m² was a thermal-management module for battery-powered applications. The use of a heat-pump function permits a significant reduction in energy consumed for heating which, in turn, leads to an extension of the vehicle's mileage range. The module is intended as a major component of the air-conditioning system, specifically for the passenger compartment and driver zone. Existing components such as the drive unit and generator are integrated in an innovative and original manner as heat sources in the vehicle's heat system.

Specializing within the Group in emission control and fuel consumption reduction, Pierburg GmbH was presenting mechatronic components for commercial vehicles including new electro-pneumatic transducers and oil valves as well as complete cooler modules which through the ingenious integration of components such as EGR valves, exhaust-gas flaps, throttle bodies and EGR cooler helps lower development and application costs. Also on show are the newest pumps working on demand to save fuel.

For years now, KS Kolbenschmidt GmbH has been developing and marketing successfully steel pistons for heavy-duty engines. Worldwide, steel pistons with a diameter of 95 to 150 mm are being developed for new commercial vehicle series. At the fair, the company was informing visitors about two piston-design strategies: the first optimizes cooling and hence achieves a reduction in cooling-oil requirement. The second opts for minimum piston height and, in combination with an extended connecting rod, decreases friction forces custom-tailored fuel-saving solutions for partly conflicting requirements.

KS Gleitlager GmbH was presenting its new three-material concept KS R55Q for main bearings on light- and medium-duty commercial vehicles and buses. The interplay of the individual components means this steel-aluminum-polymer plain bearing has a degree of resilience well superior to existing steel-aluminum bi-material bearings.

Performance thus reaches a level until now the domain of the much more sophisticated bronze-based electroplated variety. Another fair highlight was the steelbronze-plastic composite plain bearings marketed under the Permaglide brand. Either maintenance-free or low-maintenance, they are chiefly used in automotive manufacture. An examination of a commercial vehicle's structure indicates that various systems are required to interact such as engine, transmission, axles or hydraulics. For many of these interfaces, a bearing can be found in a judicious combination of materials, surface texture, and shape available from the Permaglide construction kit.

IAA Commercial Vehicles was being held for the 65th time this year. It is considered as one of the world's most important fairs dedicated to the logistics and mobility of the international commercial vehicle industry.