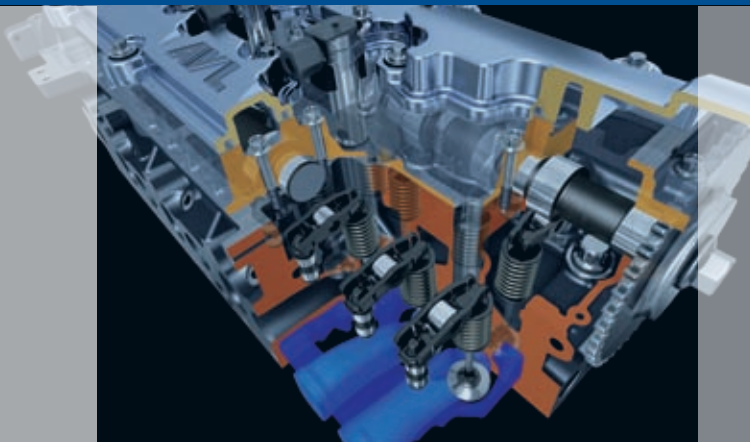


For more information see:
www.all4engineers.com

COVER STORY

Potentials of Highly Loaded Cylinder Heads



4

The resulting increased thermo-mechanical loads on the basic engine, in particular the **cylinder head** and the exhaust gas system, are especially challenging. AVL discusses future solutions for highly loaded cylinder heads within the context of the conflict technology versus costs.

COVER STORY

Cylinder Head:

- 4 Trends and Potentials of Highly Loaded Cylinder Heads in Diesel and Gasoline Engines
Helfried Sorger, Franz Zieher,
Ulrich Sauerwein, Wolfgang Schöffmann

DEVELOPMENT

Calculation and Simulation:

- 12 CFD Simulation for the Cooling Circuit of a Truck Diesel Engine
Christian Karl, Ulrich Feldhaus

Supercharging:

- 20 Diesel Engines with Low-Pressure Exhaust-Gas Recirculation – Challenges for the Turbocharger
Stefan Münz, Christiane Römuss,
Peter Schmidt, Kai-Henning, Heinz-Peter Schiffer

Surface Technology:

- 28 Reduced Friction Using a Nanolayer-based Environmentally Friendly Technology
Lior Ben-Tsur

RESEARCH

Thermo Management:

- 32 Hot Cooling – Coolant Additives on the Test Bench
Christina Berger, Torsten Troßmann, Markus Kaiser

Combustion:

- 40 Evaluation of the Residual Gas Tolerance of Homogeneous Combustion Processes with High Exhaust-gas Recirculation Rates
Thomas Lauer, Bernhard Geringer

RUBRICS

- 3 Editorial

- 3 | 19 Imprint