Sound Absorption

Dear Reader,

Keeping noise emissions to a minimum and developing cars and commercial vehicles with this requirement in mind have for a long time represented a challenge for engineers. For example, an article was published in ATZ 4/1978 on measures to reduce the intake noise produced by commercial vehicle engines. The solution was to install a single-chamber silencer in front of the air filter. The additional silencer lowered noise levels inside the truck by 3 dB. The engineers responsible also recommended a three-chamber silencer, which improved the sound insulation over a broad bandwidth from 125 to 800 Hz. The same issue of the magazine also included an article on sound absorption components made from closed-cell, cross-linked foam with integrated lead balls that were used to partially enclose the engine.

Today the tasks involved are more demanding than ever, because current and future noise emission standards are accelerating the development of more environmentally friendly and energy-efficient vehicles. The result of these tougher emission limits is the increased use of smaller engines and alternative powertrain and vehicle concepts. This presents developers with significant challenges. They have to achieve the best possible NVH results in future by introducing comprehensive sound insulation measures.

This issue of ATZ investigates this subject in an article by Henkel on sprayable sound insulation products based on renewable raw materials. This leads us neatly to the Automotive Acoustics Conference, which is taking place in Zurich on 11 and 12 July. At this leading international event, which is organised by

ATZlive and Autoneum, around 200 participants from more than 100 companies all over the world will come together to discuss the latest challenges facing vehicle acoustics engineers and to present new solutions in this field. Sound absorption measures are becoming an increasingly important consideration for the automotive industry.

I hope you enjoy reading this issue of ATZ.

Best wishes,

Dr. Alexander Heintzel
Editor in Chief