

Car seat comfort is an important goal at DaimlerChrysler. The company has developed a new ultramodern leather seat that stays cool even in a hot car. Vaisala humidity and temperature transmitters were part of the essential equipment.

The new comfortable leather seats of DaimlerChrysler's new S-Class.



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Superb Seat Comfort in the DaimlerChrysler



After thorough testing, the luxury seats were introduced in DaimlerChrysler's new S-Class.

Some years ago, DaimlerChrysler set out to develop a new level of seat comfort in cars – especially regarding seat temperature. The experimental work and tests began in the DaimlerChrysler laboratories.

Vaisala's transmitters an essential part

In its experiments DaimlerChrysler used a number of Vaisala HMP 133 and 233 humidity and temperature transmitters with modified sensor cables. The sensor head was

detached in each case and the HUMICAP sensor and Pt100 temperature sensor were directly linked with two wires.

The sensor heads themselves were placed at different points on the surface of the seat and in the backrest upholstery. Exhaustive tests were then carried out in the DaimlerChrysler laboratories and in Laredo, USA, at ambient temperatures of up to 40 °C.

Quick cooling of leather seats

After thorough testing and successful completion of the R&D work, the luxury seats were introduced in DaimlerChrysler's new S-Class.

The new leather seat and upholstery will cool within minutes even at high summer temperatures, thanks to the ten electric fans installed in the seat and the backrest. Cool air is fed from the underside of the seat, so that the driver and passengers always feel comfortable, even in a very hot car. The hot air is extracted from the seat and backrest, so that the occupant's clothing does not become sticky with perspiration.

The project leader Dr. Karl Pfahler explained: "The Vaisala transmitters were given fairly rough treatment during the tests and were not always handled as measurement instruments should be. In spite of that, we always achieved reliable measurement results and this would not have been possible with other instruments on the market." ■

The cutaway of DaimlerChrysler's seat.



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HMP228 moisture and temperature transmitter

Hydraulic Oil Monitoring for Steel Works

Vaisala's HMP228 moisture transmitter has been integrated into the SCADA systems of Expert Monitoring in the UK. The unique integrated design utilized by British Steel enables their personnel to identify the content of water in oil, as a metric for monitoring the performance of a number of hydraulic mill-control systems. The HMP228 unit measures potential water contamination in oil hydraulic systems.



Ken Gale works as the Managing Director of Expert Monitoring, and is responsible for product development.

Expert Monitoring, a company located at the Cardiff Business Technology Centre in the UK, has developed a portfolio of complementary, intelligent, PC-based process performance monitoring systems. These products are based on many years' experience of diagnosing and classifying plant failures. Ken Gale works as the Managing Director of Expert Monitoring, and is responsible for product development.

Real-time report on plant performance and system diagnostics

"Vaisala's HMP228 moisture-in-oil transmitter has been integrated into our Intelligent Supervisory Control and Data Acquisition (SCADA) systems which have been installed at a British Steel Finishing Mill in Port Talbot, UK," says Mr. Gale.

He continues: "The HMP228 moisture sensor acts as the main sensor in the SCADA systems and is known as the Machinery Information Management Expert System (MIMES). The unique design of the MIMES system allows process control knowledge to be passed into this SCADA system in the voice message format, as spoken English. Process plant signals are monitored at high speed directly from the SmartLogger™, providing the user with a real-time report of plant performance and system diagnostics."

The SmartLogger™ is a networked high-speed data acqui-