



## CLIMATIC WIND TUNNELS Daimler AG



## TEST CENTRE with TWO CLIMATIC WIND TUNNELS in SINDEFINGEN / GERMANY

Aligned to the requirements of Daimler AG, an international consortium under the technical leadership of MCE Stahl- und Maschinenbau GmbH & Co KG realised an entire test facility as a general contractor including two climatic wind tunnels, an office complex, workshops and preparation areas from November 2008 to January 2011.

Both channels with nearly the same construction form as well as the construction of the technical building are built in steel, produced and installed by the MCE-daughters from Czech Republic (MCE Slaný) and Hungary (MCE Nyíregyháza). The test chambers with dimensions of (l x w x h) 13,5 x 10 x 6 m are covered with insulated PU-sandwich-panels and faced with an acoustic lining in stainless steel. Almost every climatic condition can be reproduced in the test sections of these channels. Wind speeds up to 265km/h, rain-, snow-, sun simulation, humidity control and temperatures ranging from -40°C up to +60°C are only a short overview of the possible features.

An acoustic treatment in the test section and the airline reduces the ambient sound level down to < 65db (A) at wind speeds of 100km/h. An adjustable tunnel geometry provides the applicability of compact cars up to large transporters.

The scope of MCE Stahl- und Maschinenbau:

- Construction of the main building (technical area and office complex)
- Steel structure of the wind tunnels (660 t)
- Airline doors and maintenance platforms
- Main fan including peripheral equipment
- Rain simulation
- Snow simulation
- Boundary layer removal system
- Insulated panels (test section)
- Acoustic treatment (airline and test section)
- Movable turning vane (vehicle access)
- Vehicle entrance door
- Adjustable nozzle and collector
- Test section diffuser
- Idle city system
- Vehicle transport system

Within the consortium „ARGE CWT“ (AIOLOS, IMTECH, MCE), MCE was responsible to manage the overall project execution and the site management as the technical leader.