MCE

CLIMATIC WIND TUNNELS DAIMLER AG

HABAU GROUP

TEST CENTRE WITH TWO CLIMATIC WIND TUNNELS IN SINDELFINGEN GERMANY

Aligned to the requirements of Daimler AG, an international consortium under the technical leadership of MCE 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 design as well as the construction of the technical building are implemented in steel, produced and installed by the MCE subsidiaries 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 265 km/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 100 km/h.
An adjustable tunnel geometry provides the applicability for compact cars up to large transporters.
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.

Scope of supply:

- 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 (ø 4,740 m) 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

Facts & Figures:			
Building dimension (l/w/h):	70 x 62 x 19 m	Customer:	Daimler AG
Wind tunnel dimension 2 pc. (l/w/h):	42 x 8 x 18 m	Project period:	2008 - 2011
Floor surface of plenum (l/w):	13,5 x 10 m		

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