



Hercules Task 2.2

Status and Progress, March 2006



General objective:

To develop numerical models on the formation of engine emissions

Detailed objectives:

- Numerical description of in-cylinder flow
- Chemical description of combustion and emission formation
- Implementation and integration of sub-models
- Validation and evaluation against measurements
- Application to engine conditions



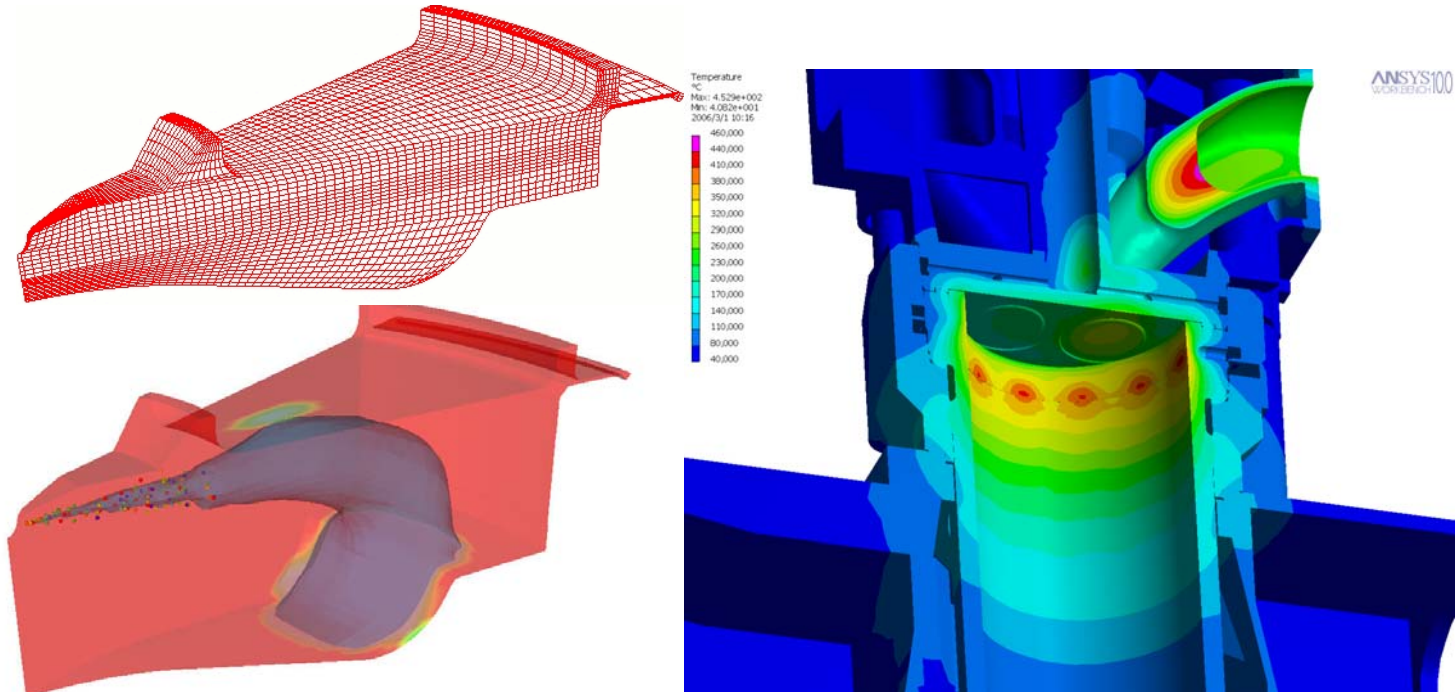
MAN B&W Diesel

Partner: MAN B&W Diesel AG Status and Progress



MBD-D
Augsburg

- CFD sub-model development completed
 - Development new one-component surrogate fuel models for MGO, MDF and HFO
 - Linking CFD-combustion simulation and FEM simulation for calculating thermal load of the combustion chamber components (self-developed data converter: AnsCo)





Partner: MAN B&W Diesel A/S Status and Progress



MAN B&W Diesel



MBD-DK

Copenhagen

- CFD model consolidated. Almost all code development finalized.
- Extensive validation run series:
 - 4T50ME-X, K98MC, S50MEC, S35MC
 - very low load to full load
 - Different fuel injection, (profiles and atomizers)
- Experimental work for validation in progress

4T50ME-X: Kiva vs. measurements

Load: 100 %

75%

50%

25%

