SIMULATION FOR HYDROGEN FUEL COMBUSTION ENGINES - FLUIDS DYNAMICS AND STRUCTURAL MECHANICS

- Fluids and structural analysis with system design for hydrogen combustion
- Shorter development time, lower costs, fewer physical prototypes
- Wide range of simulation tools from concept to detailed design

3D CFD advanced injection and combustion modelling for hydrogen

- Complete toolchain for accurate simulation of combustion phenomena in all engine types
- Specific models for lean unstable hydrogen combustion

1D CFD lean hydrogen combustion

- Surrogate optimisation applied to model calibration for complex combustion phenomena
- Predictive models for lean hydrogen accounting for thermo-diffusive instability in conventional and real-time applications

FE thermal analysis for hydrogen combustion

- Fast, accurate calculation of thermal boundary conditions for hydrogen engines

Acknowledgements

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November 2023