

TASK 1.2: Thermodynamics of engine with extreme design parameters

Objectives: To investigate operation of 2-S and 4-S engines under extreme thermal and mechanical load, design new components and test them full-scale

Progress Highlights:

2-stroke engine

- Complete prototype tests for liquid cooled exhaust valve spindle and new top piston ring on 4T50ME-X test engine
- Service tests of five versions of compound fuel valve nozzles of 80MC and 90MC in progress

4-stroke engine

- Complete test run with extreme operating parameters: MFP=250 bar, MPS=12.1 m/s and MEP=30 bar
- Reduction of power / weight ratio up to 23.7% for a 6-cyl in-line engine



Compound fuel valve nozzle



Liquid cooled exhaust valve spindle



New piston bowl

Partners:

