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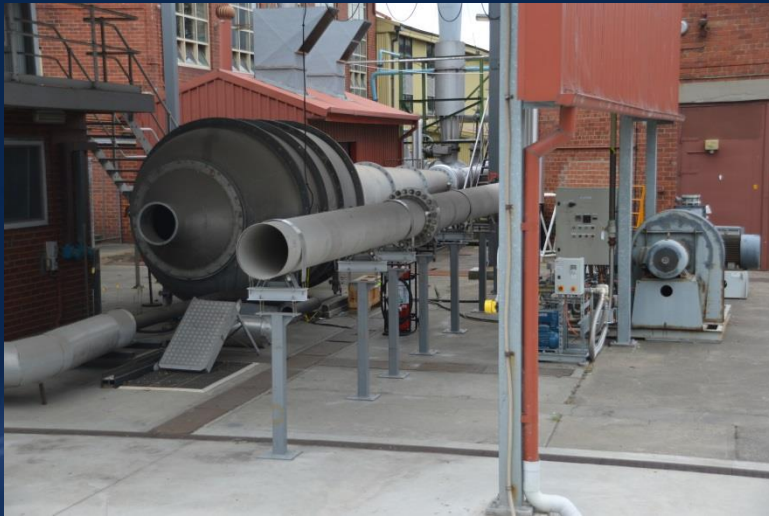


Australian Government

Department of Defence

Defence Science and Technology Group

DST Group Thermal Test Precinct



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DST
GROUP

Science and Technology for Safeguarding Australia

Thermal Test Precinct Facilities

DST Group actively collaborates with academia and industry in areas related to combustion, thermal systems and propulsion systems.

The Thermal Test Precinct is open for joint research with Australian industry and academic organisations on projects of Defence relevance

Potential areas for engagement include:

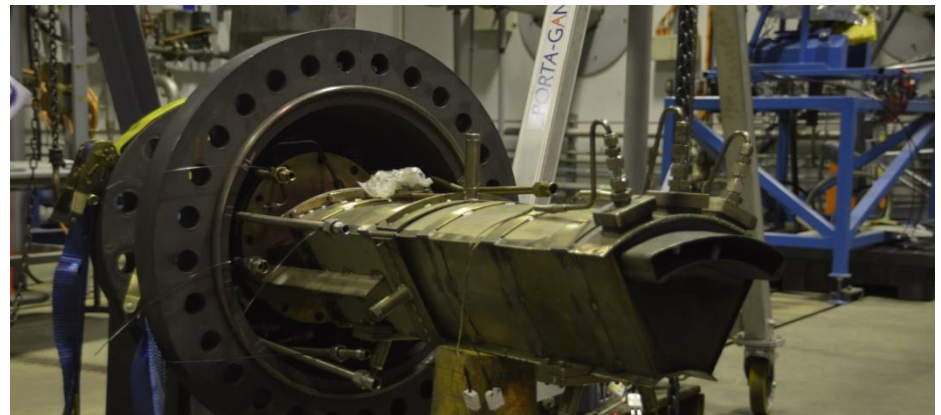
- Combustion studies
 - Liquid, gaseous, multiphase
- Combustor components
 - Research combustors, hot section testing
- Spray/flame visualisation
- High/Ultra high temperature materials testing
- Turbo/compressor mapping
- Energy recovery systems



Thermal Test Precinct Facilities

Combustion Test Facility

- Two compressed/heated air supply systems
 - 3 MPa, 9.5 kg/s, 30 - 650 °C
 - 1 MPa, 4.5 kg/s, 20 - 400 °C (dried or humidified)
- 4 test lines (3 internal, 1 external)
- Fuel rates 1800 kg/hr
- Online emissions testing
 - gas analysis (CO, CO₂, HC, NO_x, O₂)
 - particulate matter (particle counting)
 - VOC/Organics
- Fuel nozzle spray testing



Thermal Test Precinct Facilities

Bulk Fuel Farm

- 80,000 Lt
- Multiple tanks for specialty fuels



Infrared Signature Test Facility

- Free Jet Facility
- High enthalpy air pipe
- Full Scale IR Suppressor Test Bed

