

Hot Gas Testing: Rigs & Services

Engine Components: Test & Validation Services

Testing Services
Since 2003

HOT GAS TESTING

- ▶ Thermal fatigue & functional testing
- ▶ 24/7 monitored testing
- ▶ 12,000-15,000 hours/year
- ▶ Coolant circuits available for heat exchanger testing

OTHER TESTS

- ▶ Vibration testing (3-axis and uniaxial shakers)
- ▶ Testing emission with engine dyno & gas analyser
- ▶ Environmental testing
- ▶ Functional testing (efficiency, pressure drop...)

SERVICES

- ▶ **Advanced instrumentation:** strain gauges, thermocouples, pressure, accelerometers, flow...
- ▶ **Portable data acquisition equipment for measurement at client's facilities:** engine & vehicle
- ▶ **Signal processing services:** time-frequency analysis, order analysis, fatigue calculation & life estimation

Testing Rig Design

- ▶ **Accumulated experience:** 9 hot gas test rigs manufactured for exhaust components

Flow range: 200 – 60,000 l/h
Maximum temperature: 130 °C
Maximum pressure: up to 6 barg
Cooling power: up to 1,000 kW



Coolant Unit

Flow range: 20 - 2500 kg/h
Pressure: up to 5 barg
Temperature: up to 1,200 °C



Hot Gas Generator



Fluids: water / ethanol
Pressures: up to 40 barg

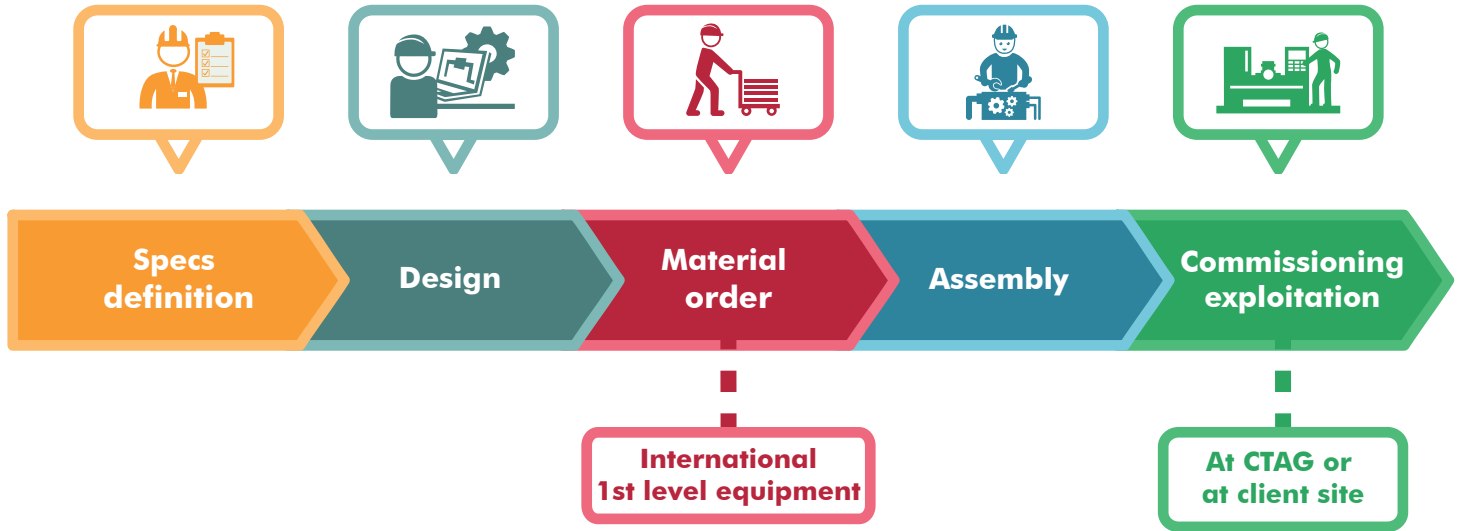
Rankine Cycle Unit



Maximum temperature: 900-950 °C
Maximum pressure: 5 barg

Thermal Switching Unit

Custom-made Bench Timeline



Custom-made Software

HMI

PC

Tablet

Others

Operating Systems

CONTROLLERS

PLCs

FPGAs

μ Controller

ECUs

Other RT Controllers

SOFTWARE

NATIONAL INSTRUMENTS
LabVIEW
CERTIFIED DEVELOPER

Microsoft
.NET

python

**MATLAB
SIMULINK**

SIEMENS

SQL

PROXECTO COFINANCIADO



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