

Thermal Power Generation Services



With over 60 years experience in thermal power, we are the leading technical experts in this space in Australia and Asia.

"Specialised skills, industry knowledge, excellent services"

Engie Australia

Services

- Coal testing and combustion optimisation
- Risk based inspection
- Metal Failure investigation
- Plant performance testing
- Coal performance advisory service

Outcomes

- Availability of plant
- Increased power output
- Lower maintenance costs
- Ongoing performance advice
- On-time and budget

HRL Head Office

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HRL has further capabilities providing services to a wide range of other Industries.

For more information, please visit our website at hrl.com.au

Our Clients



Meet our experts and their capabilities

ENGINEERING AND MATERIALS CAPABILITIES

Strategic review of Plant inspection schedules

Plant life extension and asset management

Failure analysis and weld repair

Plant inspection and code compliance

Stress analysis, vibration analysis, temperature and strain surveys

High Pressure Piping

Fracture mechanics and structural integrity

Corrosion investigation and mitigation

Material selection and identification

Advanced Non-Destructive Testing (NDT) and RBI programs

Mechanical testing and product compliance assessments

Fitness for service and remaining life assessments

Plant flexibility options

Boiler fouling and run length optimisation

GREENHOUSE AND ENVIRONMENT CAPABILITIES

Mandatory Greenhouse and Energy Reporting

Compliance (NGERS)

Identifying Efficiency Improvement and CO₂

Abatement Opportunities

Emissions Reduction Fund (ERF) Assistance

Renewables and Alternative Fuel Utilisation

Energy Auditing

PLANT PERFORMANCE SERVICES

Independent Boiler, Gas & Steam Turbine Performance Testing

Testing of Major Plant Equipment Performance (eg Condensers/Fans/Rotary Air Heaters/Mills etc)

Combustion Optimisation and Tuning

Stack Emissions Testing and Measurement of Emissions

PROCESS ENGINEERING, DESIGN AND PROJECT

Process Equipment Design, Specification, Sourcing, Tender Specification and Manufacturing QA

Feasibility through to FEED and Detailed Design Studies

Process Modelling (eg ASPEN, Thermoflex and CFD)

Capital and Operating Cost Estimation

Project Implementation and Project Management

ANALYTICAL CAPABILITIES

NATA accredited to ISO17025 - Quarantine approved – Licenced to handle poisonous and toxic substances

Coal, ash and combustion by-product analysis

Bore core coal programs including testing according to SECV schedule for lower rank coals

Deposit and foreign material identification such as unknown deposits on turbines or in boilers

Water treatment chemicals, water and waste water sampling and analysis

Sampling services for collection of coal, ash and other combustible materials

Resource evaluation including biomass, waste and alternative fuel characterisation

ANALYTICAL TECHNIQUES

Coal analysis: Moisture, ash yield, volatile matter, calorific value, Ultimate analysis (C,H,N,S,Cl,O,F)

Ash fusion temperatures, Ash composition including major and trace elements

Density (bulk, relative, apparent and true) to assist with coal royalty calculations

Water analysis including pH, Conductivity, TSD,TSS BOD, COD, turbidity, cations, anions, major and trace elements

Mineral and foreign material identification (ICPOES, ICPMS, SEM-EDX, XRD, XRF, FTIR)

Particle size analysis using laser or sieve techniques

Ash fusion temperature analysis and Thermogravimetric analysis using the TGA/DSC

In situ gas analysis Implementation

Engineering and Materials Services

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