

INSTALLATION → COMMISSIONING → INSPECTION → REPAIR → MAINTENANCE



EXPERIENCE OUTLINE

GAS TURBINES → ROTATING MACHINERY → ASSOCIATED SERVICES

Operations and Engineering Support

Copperwell provides engineering and operations support to clients in the Energy and Oil & Gas industry world-wide

Expertise: -

- Operations, Maintenance and Engineering services for rotating equipment for major oil companies in North Sea, Africa, Middle-East, Iraq including
 - *Siemens (Rolls-Royce, Allison) and Solar T60/Mars/Saturn gensets, high pressure re-injection pumps, gas compressors, general associated equipment*
- Providing technical support to major Oil & Gas companies relating to maintenance, warranty, and supply chain issues.
- Providing contracting and maintenance planning expertise to clients for short and long term agreements with OEMs and first tier providers. Expert in LTSA contracts.

Sample Experience: -

- Manage maintenance programme for major offshore oil producer in North Sea on Siemens SGT-200 gas turbine fleet
- Providing full engineering support to NOC for obsolete gas turbine maintenance work including development of testing procedure and facility for OEM unsupported gas turbine fleet offshore Angola.
- Analysis of operational, engineering, RA and causality issues of FPSO genset Taurus 60 catastrophic failure
- GT TA for client, providing guidance and expert opinion resulting from major failure and subsequent warranty claim against an OEM
- FEED support for FPSO prime mover design in Aberdeen (Taurus 60)
- Reviewing operational support and associated risks for a major primary power project in Scotland (*Rolls-Royce Centrax Allison 501K sets*)
- *TA for Nuclear site emergency back-up power generation gas turbine maintenance programme*
- Drafting of project and operations risk assessment and assurance procedures – North Sea



Sample
Experience
Solar Gensets

SOLAR – RECONDITIONED SUPPLY

TransTexas Gas - Laredo Texas

Two Reconditioned Solar Saturn Compressor Sets, Pipe And Valve Skids.

Northern Natural Gas - Waterloo Iowa

Two Reconditioned Saturn Compressor Sets, Skids, Control System & MMI.

Texas Gas – Corsicana, Texas

Solar Centaur Compressor Set Incl PLC Control System Turn Key Installation.

Northern Natural Gas - Belle View, Wisconsin

3 Saturn Compressor Sets, Pipe And Valve Skids PLC Control System & MMI.

Lincoln, Nebraska

Solar Saturn Compressor Set, Pipe And Valve Skid PLC Control System MMI.

Southwest Gas - Batts Ferry, Texas

Reconditioned Solar Saturn Compressor Set, Including Pipe And Valve Skid.

Northern Natural Gas – Hutchenson, Kansas

Solar Saturn Compressor Set, Pipe And Valve Skid PLC Control System & MMI.

Union Pacific Resources - Rock Springs, Wyoming

Reconditioned Solar Saturn Generator Set PLC Based Control System.

Union Oil Company - Offshore Louisiana

Solar Saturn Compressor Set Including A Single Lift Offshore Module.

Union Pacific Resources – Bishop, Texas

Reconditioned Solar Saturn Compressor Set, PLC Control System.

Questar Gas Management - Emigrant Trails Gas Plant Wyoming

Two Solar Saturn Single Shaft Gas Fuel Engine, Gearbox, Generator Overhauls.

Delta Gas - Salt Lake City, Utah

Solar Saturn Gas Turbine Gen Set, PLC Control System, Turnkey Installation Including Building And Switchgear.

Dubai Petroleum - Dubai Uae

Multiple Solar Saturn And Centaur Overhauls.

Questar Gas Management - Emigrant Trails Gas Plant Wyoming

Reconditioned Solar Saturn Generator Set, Switchgear Turnkey Installation.

Gasprom – Moscow, Russia

Multiple C16 Rotors, C168h Compressor Bearing And Seal Assemblies.

Grayford Engineering London, England

C306 Compressor Rotors, Bearing Assys, Spare Gas Producers, Saturn And Centaur.

Marson Energy - Kuala Lumpur Malaysia

Reconditioned Solar Saturn Generator Set, PLC Control System For FPSO.

South Louisiana Ethanol - Belle Chasse, Louisiana

Two Reconditioned Solar Taurus 60 Generator Sets.

Shell Petroleum - Offshore Louisiana

Reconditioned Solar Centaur Compressor Set, construction of Single Lift

SOLAR - SERVICING

Management of fleet of 25 Solar Turbines packages including tandem compressor and generator packages driven by Centaur and Taurus gas turbines in the Caspian Sea.

Inspection repair Taurus 60 – BW Offshore FPSO

Rebuild of three generators driven by Mars 100 Solar Turbines in the North Sea

Retrofit of 2 Mars 100 generator packages including (fuel system, control system and IGV controllers) in the North Sea

Inspection and Maintenance of FPSO Taurus 60S packages including air intakes

Maintenance and management of Saturn, Centaur and Taurus packages driving triple body compressor packages as well as tandem compressor packages and generator packages in West Africa

Best practise design review of Solar Turbines control system interface to platform DCS system in Aberdeen

Technical assistance and Solar various spares / parts supply Total West Africa

Technical support and Solar various spares / parts supply in Papua New Guinea

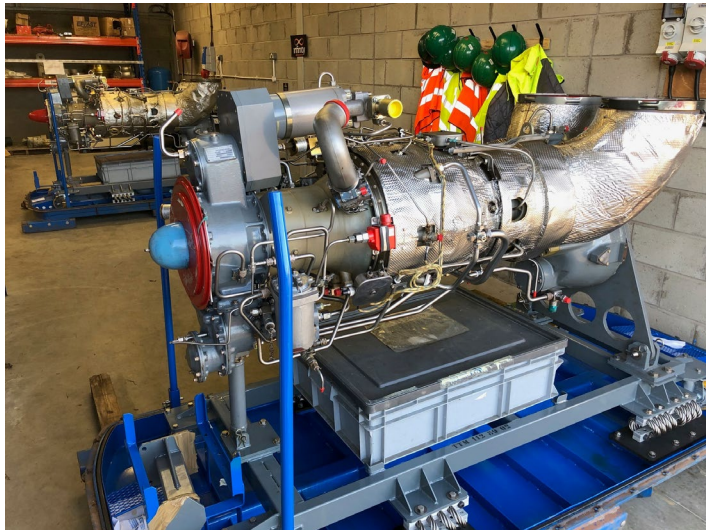
Technical support and Solar various spares/parts supply CNOOC / Sinopec, Iraq

Case Study

Offshore Water Injection
Sonangol, Angola

Sonangol Angola PALP2 Offshore Water Injection Pumps

Provided all technical assistance including FEED engineering and testing and maintenance procedures and facility for the re-introduction of overhauled engines into operation. Included overcoming obsolescence issues and lack of accredited testing facilities.



Turbomeca Turmogas III E engines