

Extensive experience in pipeline and field gas compression, field gas depletion compression and underground gas storage, both onshore and offshore.

Challenges

Proper specification and selection of compression equipment that is cost effective, energy efficient and flexible, with low maintenance and optimum environmental performance is key for our clients.

Compression projects face a number of environmental and economic challenges including:

- Reducing field pressures
- Reduction of capital and operational expenditure
- Boosting gas production
- Improving project environmental performance.



“ We deliver equipment designed to industry standards and compliant with stringent emissions and noise requirements, fully optimised for our clients’ needs. ”

Grant Johnson Front End Solutions Manager



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Grant has over 20 years’ experience in the delivery of projects in international gas processing for onshore and offshore installations.

Our approach

We have undertaken upgrades, improvements and modifications to compression systems within challenging live environments. We demonstrate best available technologies in equipment selection for gas compression facilities to satisfy IED legislation.

Our compressor selection is highly customised to individual needs. We have experience in a wide range of OEMs and technologies including:

- Designs capable of delivering high compression ratios for compact systems, multiple compressors and multiple side streams
- Low maintenance oil-free systems with active magnetic bearings, high speed motors or variable frequency drives
- Advanced gas turbine engine systems and catalytic systems.

Our extensive experience covers UK and international, onshore and offshore project delivery including pipeline and field gas compression, field gas depletion compression and underground gas storage.

Our services

- Consultancy and conceptual studies.
- Specialist capability at all levels of engineering and design.
- Compressor selection for Industrial Emissions compliance and procurement strategy.
- Construction, commissioning, maintenance and training.

Benefits:

- Lifecycle cost reduction.
- High standards of safety, health and environmental protection, with robust plant performance and reliability.
- In-house specialist teams delivering world class solutions, with strategies for configuration of compressor equipment to maximise operability and flexibility.
- Best available techniques and whole life value options.

Example project experience

Tolmount gas field, UK – Offshore gas compression

Assessment of gas export and compression options associated with increased produced gas rate and the impact on Tolmount topsides.

Solution

Feasibility and conceptual studies, evaluation of screening options with multidiscipline assessment of options, preliminary cost estimation and procurement.

Outcome

- Four development schemes identified, with scheme evaluation for re-wheeling of existing compressors.
- Production of HYSYS simulations to evaluate compressor operating points.
- Opportunities identified for potential cost and weight savings through debottlenecking.



National Grid, UK – Compressor stations emissions reduction projects

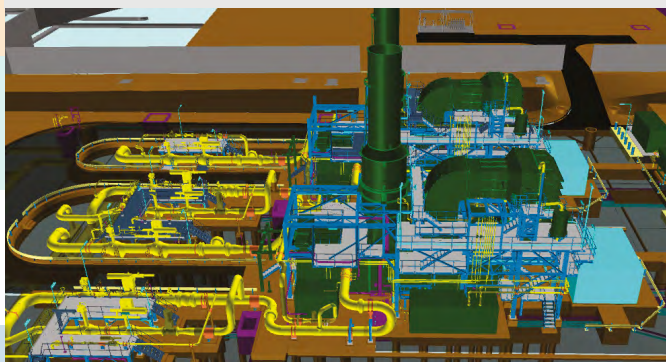
Upgrade to compressor stations with replacement of existing 15MW compressors to meet stringent emissions and noise requirements.

Solution

Feasibility studies, conceptual design and front end engineering, detailed design, build / commission, project management and procurement.

Outcome

- Selected and developed safe and reliable best available technology (BAT) solutions.
- Reduced overall risk on the NTS, preventing station outages during winter months.
- Phased execution strategy which ensures installation works does not compromise National Grid's ability to meet network demand.



E.ON Gas Storage, UK – Holford gas storage project

Development of underground salt caverns into gas storage facilities to increase the UK's gas storage capacity and balance daily gas market.

Solution

Front end design, EPCm and commissioning of the gas processing plant and associated infrastructure, with complete performance/reliability tests and ongoing asset support.

Outcome

- Installed three trains with 8MW centrifugal compressors and high pressure underground pipelines.
- Optimal solution using compact airtight, oil-free compressors for two-way operation.
- Multiple modes of operation and high level automation.



ENI Pakistan – Bhit well site gas compression

Design and delivery of 4 x 3.3MW and 6 x 1.9MW reciprocating compressors with 500kW gas engine driven generators at Bhit wellheads.

Solution

Conceptual studies, detailed engineering design, procurement and project management services.

Outcome

- Plant life extended through maximising gas recovery.
- Compressors enabled gas flow to Bhit gas plant with lower pressures at the wellhead, increasing gas recovery from reservoir without compromising plant operation.
- Achievement of project milestones ahead of schedule, allowing gas delivery targets to be maintained.

