

Engineering Services

sigma

concept ...

... design

construct ...

... install

manage ...

Discover more at www.sigmaoffshore.com



Independent providers of external turrets, moorings and engineering services

Some information about us >

Sigma Offshore is a company of engineers and project managers based in Aberdeen working primarily within the offshore oil and gas industry. We provide bespoke mooring and fluid transfer systems, including the Smart Mooring System, and also provide consultancy services in structural engineering, naval architecture and geotechnics.

Sigma provides project management services in engineering, procurement, installation, and commissioning in subsea and floating production developments using, experienced, qualified personnel.

The core team behind Sigma is a group of reassuringly experienced engineers, with a base of knowledge gained across a broad range of disciplines within the oil and gas industry. Several of our team each have over 30 years experience of offshore structures and some have worked together since 1987.



Our core team includes the following personnel :

**David Galbraith BSc, CEng., MICE, MEI
Managing Director >**

With a strong structural background, David has over 30 years experience with jackets, pipelines and subsea structure development projects including design, construction, installation, operation and decommissioning phases. He is responsible for many industry innovations including use of carbon fibre and diverless techniques. He is a project leader for International Standards development and has undertaken loss adjustment and expert witness assignments.

**Peter Jay, BSc., CEng, MIMarE, MEI
Principal Structural and Geotechnics Engineer >**

The majority of Peter's 40 years of experience is in the oil and gas industries. He is a chartered engineer and has been involved in all aspects of offshore oil and gas engineering covering fixed platforms, floating production systems, drilling rigs and subsea structures as well as onshore gas terminals. Legal qualifications have involved him in arbitration work and contract dispute resolutions together with the provision of expert witness services.

**Robin Colquhoun, BA, MA, CEng, FICE
Principal Consultant >**

With honours degrees in Engineering and Law, Robin has vast experience in heavy civil engineering and in Offshore. One of the founders of Wellstream he is an expert in rigid and flexible pipelines and risers. Robin was chief engineer for Sigma's predecessors, Dalriada Faber and Sigma Subsea where he also undertook audit and forensic investigation work. Other expertise includes diving and WROV activities and specifications.

**Mike O'Connell, BEng.
Principal Naval Architect >**

Grounded in Naval Architecture and Structural Design, Mike's main area of expertise is in the structural and dynamic analysis of floating structures, his 10 years' experience in oil and gas encompass R&D, mooring and riser analysis and design and subsea construction.

References and project / installation expertise includes >

Mobil Beryl; Teekay Ikdam FPSO; Chestnut Field; Buchan Midwater Arch; Phillips Rosarito LNG; Petroleum Safety Authority; International Standards / OGP; Oceaneering; Bonga.

Our key capabilities >

Floating structures and ships>

Sigma Offshore have extensive experience in the analysis and design of vessel hull structures for FPSOs and other vessels for both new builds and conversions of existing vessels. This includes motion and response analyses of vessels and mooring systems and linear and non-linear finite element analysis and detailed analysis for fatigue life determination.

Our experience includes the design of process decks, flare towers and supports for process equipment and pipework.

Fixed platforms - substructures and topsides >

Our engineers have extensive experience in all aspects of both steel and concrete fixed offshore structures and deck structures. This includes:

- Design
- Fabrication
- Installation
- Repairs
- Inspection & Maintenance
- Decommissioning
- Defect assessments
- Emergency preparedness
- Codes and standards
- Guidance
- Fire and blast protection



Subsea and pipelines >

We have wide experience of subsea developments particularly with respect to Subsea structures, pipelines and jumpers. Sigma Offshore provide project management services for subsea developments including the development of procedures and also design and analysis capability for pipelines, tie-ins and all subsea structures.

Risers, moorings, anchoring and foundations >

Sigma Offshore have developed analysis techniques using state of the art software for the analysis of riser systems and mooring systems. We organize and specify model testing programmes together with assessment of the results. Anchoring system expertise includes anchored, piled and suction piled solutions.

Decommissioning >

We are experienced in all aspects of decommissioning of offshore facilities for the oil and gas industries, our capabilities include a thorough understanding of all the political and procedural requirements and the environmental and financial issues as well as the engineering and operational aspects of a decommissioning project.

Marine renewable energy >

The experience of our engineers includes the major marine renewables: Wave, tidal and offshore wind. For wave and tidal our naval architectural expertise and mooring analysis capabilities complement the power generation inventions.

Onshore facilities >

Sigma Offshore provide design and analysis services for support structures to equipment and pipework, flare tower design and the design of blast resistant structures. Explosion response analyses are performed using specialized software.

Further information and contact details >

Multi-discipline expertise >

Our sister company, Clerk Maxwell, complements Sigma Offshore's structural and naval architectural expertise and provides a full multidisciplinary capability to consult on any area of offshore and onshore design, operation and modification.

Analysis tools >

Sigma uses state of the art licensed software across the board. The main tools used for moorings, risers and vessel motions are Orcaflex and AQWA: providing fast and accurate results. These programs are the primary tools in the design and analysis of our proprietary mooring system, SMS

Management Systems >

Sigma Offshore Ltd holds ISO registration for all three of ISO 9001 - Quality management systems, ISO 14001 - Environmental management systems and OHSAS 18001 - Occupational health and safety management systems. The various management manuals are backed up by detailed work procedures.

In addition Sigma Offshore Ltd is a member of the International Marine Contractors Association (IMCA) to ensure that we keep abreast of developments and safety notices throughout the global industry.

sigma



Sigma Offshore Ltd Contact details

Aberdeen Office

Salvesen Tower
6th Floor Reception
Blaikies Quay
Aberdeen
AB11 5PW
T:+44 (0) 1224 531 330

President & CEO:

Alistair Dornan
adornan@sigmaoffshore.com
T:+44 (0) 1224 531 331

Chief Technology Officer:

David Galbraith
dgalbraith@sigmaoffshore.com
T:+44 (0) 1224 531 334

Oslo Office

Rådmann Halmrasts Vei 18
1337 Sandvika, Norway
Postal Address:
Postboks 2
1300 Sandvika, Norway
T:+47 4021 5170

Vice President

Business Development:
Eirik Refstie
erefstie@sigmaoffshore.com
T:+47 4021 5170

Houston Office

10497 Town & Country Way
Suite 310
Houston,
Texas 77024
USA
T:+1 (832) 200 4832

Executive Vice President

Business Development:
Allan Millmaker
amillmaker@sigmaoffshore.com
T:+1 (832) 755 6959

Sigma Offshore Ltd

Registered Office: Salvesen Tower
Registered in Scotland No. 245525
VAT Registration No. 927 4453 09

