GMC is an independent offshore engineering service company and contractor with over 20 years of experience in delivering offshore projects around the globe.

GMC’s multidiscipline engineering team has extensive experience in all aspects of offshore project delivery, including the design and installation of fixed and floating facilities, pipelines, risers, and subsea systems.

Drawing on in-house experience, expertise and tools, GMC can offer clients a Pipeline and Riser Engineering service to analyse and engineer effective pipeline systems including:

- Route Selection
- Diameter Sizing
- Materials & Corrosion
- Design for Strength
- On-Bottom Stability
- Thermal Design
- Expansion & Buckling
- Spans
- Protection
- SCR Catenary Analysis
- Installation Requirements

**GMC SOFTWARE TOOLS**

- **OFFPIPE** - Finite Element Analysis (FEA) of nonlinear problems; for example, stress analysis of offshore pipelines, including dog legs, expansion loops, etc.

- **SACS** - FEA of offshore structures, such as large-scale stingers, platforms, & steel structures.

- **MOSES** - A specialised software package for the analysis of hydrostatic loadings.

- **ANSYS** - Used for simulation modelling in a wide range of applications; for example, the action of severe wave activity on pipelines & risers.

Combining experience, expertise, and tools, GMC can undertake a wide range of pipeline engineering, from delivering a turnkey engineering package for a specific project, to smaller scopes of work supporting existing client teams.
GMC ENGINEERING PROJECT EXAMPLES

ENI - APPALOOSA SUBSEA PIG LAUNCHER
Customer: ENI Petroleum
Project: Longhorn / Appaloosa
Location: Gulf of Mexico
Water Depth: 1280 meters
Year: 2009 - Current
Scope of Work: Engineering design, manufacture, project management and installation of a subsea pig launcher.

STAT MARINE SRP OFFSHORE / LANDFALL OIL PIPELINE
Customer: Stat Marine / Statoil
Project: SRP Offshore / Landfall 42” Crude Oil Pipeline
Location: Bahamas SRP Crude Terminal
Water Depth: 100 meters maximum
Year: 2010 - 2011
Scope of Work: Perform offshore pipeline lateral stability analysis and create pipeline alignment sheet and trench profile. Work also included the pipeline thermal expansion analysis for the onshore portion of the proposed 42” pipeline to optimise the onshore pipeline system.

EXXON MOBIL - ARKUTUN DAGI TESTING PLATFORM
Customer: Exxon Mobil
Project: Pipeline Testing Platform
Location: Houston
Water Depth: N/A
Year: 2011
Scope of Work: Design of pig receivers, work platforms, and handling systems. Fabrication and delivery of piping spools and handling system.

RELATED GMC ENGINEERING PROJECTS

1999 - 2010
Responsible for the detailed design of two (2) 6-inch SCRs in the water depth of 720 feet. Work also included the design of subsea wellhead jumpers and pipeline & umbilical spanning analysis. The dual 6-inch flowlines are approximately 17 miles each and run from the subsea well at the water depth of 1,350 feet to the platform “A” in GB-189.

2009
Responsible for the riser wet park and recovery feasibility study during the construction campaign of Chevron Frade multi flowlines and umbilicals installation at the water depth of 1300m in Brazil for Acergy. Work also includes riser hang off, riser clashing and pipelay tension control to maintain the pipeline on-bottom stability on the curve.

2005
SCR/Flow-line pullout analysis, J lay analysis, installation sequence development, free span analysis for 8” SCR and 10” flow-line on the Mad Dog Southwest Ridge Production project at the water depth of 5,000 feet.

1996
Design and analysis of SHELL 8-inch steel catenary riser at the GC-65 platform “A” in the water depth of 1350 feet. Work included riser load development, static & dynamic strain analysis, and SCR sensitivity study due to the variation of riser length to be installed.

ABOUT GMC
GMC is an industry leader in innovative engineering, project management, and installation solutions and products, from the seabed to the surface, for offshore oil and gas SURF, drilling, and production projects. Established in 1990, GMC has offices in the UK and USA.

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