Zebec
MARINE CONSULTANTS & SERVICES

OIL AND GAS ENGINEERING

Zebec Marine Consultants and Services, an ISO 9001:2015 certified company offering various solutions to the Oil and Gas industry.

The scope of our services spans structural analysis, ocean engineering design, naval architectural services and marine engineering services.

Zebec Marine Consultants and Services

Structural Analysis and Engineering

- 3D Hull Modeling
- Finite Element Analysis
  - Global FEM
  - Local FEM
- 3 Hold Analysis
- Strength Assessment
- Topside Module Structure Analysis
- Rig Floor Structure Analysis
- Drill Mast / Derrick Structure Analysis
- Global Integrity for Jack-ups

FPSO / FSO / FPU Engineering

- Candidate Vessel Selection
- Selected vessel conversion design
- Hydrodynamics and Limit State Analysis
- Structural Evaluation
- FPSO Pre Bid Engineering
- Topside Integration to FPSO Hull
- Marine Systems Design

Offshore and Subsea Engineering Services

- Spread Mooring Analysis
- Green Water Analysis
- Tandem Offloading Analysis
- DP Capability Study
- Load out Services and Procedure
- Barge Ballasting Calculations
- Lifting Analysis
- Rigging Design
- Subsea PLEM , PLET Structure Analysis
- Design of Manifold and Templates
- Riser analysis

Risk Management Services

- HAZID and HAZOP
- Process safety analysis
- Likelihood and consequence analysis
- Impact and control measures
- Risk reduction methods
- Cost benefit analysis
- Risk manual preparation

Our Software Profile	
ISYMOST	A 3D graphical software program for Finite Element modeling with graphical analysis output.
NSO	A Structural static/ dynamic mode solver. Deterministic or spectral fatigue analysis. Includes various code checks.
Hydrostar	Hydrodynamic software to evaluate 1st & 2nd order wave loads and induced motions of one or several ships or marine structures of any type in deep and finite water depths
FATA	A post-processing software that performs spectral analysis and short and long term statistics for sea states
Ariane	Software for static and time domain simulation. Fully interfaced with Hydrostar
Maxsurf	Powerful three-dimensional surface modeling system for use in the field of marine design
Hydromax	Hydrostatics, stability and longitudinal strength program specifically designed to work with Maxsurf
Hullspeed	Predicting the flow resistance of a ship hull. Interfaced with Maxsurf
Seakeeper	Vessel Hydrodynamic response calculating program. Interfaced with Maxsurf
MARS	Checks strength and fatigue of frames and bulkheads as per CSR rules
DELFT-3D	Solves shallow water equations and other transport equations to simulate hydrodynamics, sediment transport, salinity dispersion, temperature dispersion.
SWAN	Spectral wave model which has capability to simulate wind generated short crested waves.
RHINO	3D Hull surface/solid modeling software
ORCAFLEX	Dynamic analysis of offshore marine systems

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