



THE GLOSTEN ASSOCIATES

Consulting Engineers Serving the Marine Community

Design Services

Engineering and Analysis

Consulting and Economic Analysis

Glostén's experience in solving unique design problems has led us to develop state-of-the-art engineering analysis capabilities. These skills can stand alone or be coupled with our consulting and design services for new insights. Our associates maintain an active awareness of industry trends, innovations and new analytical tools to offer you the most advanced engineering and analysis services. Whether your needs require a conventional or one-of-a-kind approach, look to us for the solution.



Solutions

Ship Motions and Seakeeping

- Radiation and diffraction methods
- Multi-body problems
- Ships, platforms and civil structures
- Frequency, probability and time-domain

Structural Analysis

- FEA (finite element analysis)
- Global and detail FEA models
- DLA (dynamic loads analysis)
- Vibrations analysis, testing and measurement
- Spectral fatigue analysis

Hydroelastic Structural Dynamics

- Floating bridges, breakwaters and platforms
- Impulse response functions
- Global finite element analysis
- Structural damping

Computational Fluid Dynamics (CFD)

- Wakes and free surfaces
- Wake propagation
- Potential, boundary layer and viscous flows
- Wind and current loads

Marine Climatology

- Statistical and extremal analysis
- Hindcasts and time series evaluation
- Operations and voyage planning
- Over-the-beach operations and site selection

Maneuvering Simulation

- Autopilot driven fast-time simulations
- Drifting
- Safety assessments for ports and harbors
- Prediction and documentation of maneuvering
- Speed-dependent tug forces
- Tug requirements for tanker escort

Mooring and Cable Structures

- Cable installations
- Cable handling systems
- Vessel selection / availability assessment
- Outfit and equipment design
- Climatology and operability assessment
- Station-keeping and positioning
- Mooring system design

Ship Escort

- OPA 90 implementations
- Regional plans
- Company compliancy plans
- Tug evaluation
- Full-scale trials



Results

Serving Many Industries:

- Commercial shipping
- Tugs and barges
- Ferries
- Offshore and upstream development
- Oil and LNG shipping
- Oceanographic research
- Shipyards
- Marine construction
- Salvage
- Government agencies
- Civil engineering
- Environmental products and services
- Industrial clients

Model Testing

- Testing acquisition and management
- Resistance, propulsion
- Propellers and cavitation
- Seakeeping
- Maneuvering
- Wave-induced forces
- Large-scale natural environment testing
- Wind tunnel testing

Capability, Operability and Risk Assessment

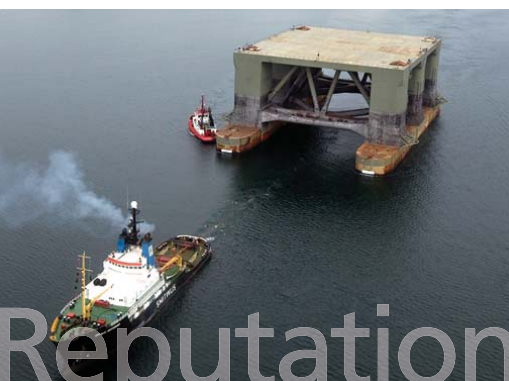
- Deterministic and first principle analyses
- Probability domain analysis
- Vessel responses, forces
- Speed, fuel consumption
- Level I, II and III risk methods
- Actuarial, time-domain and Monte Carlo methods
- Failure modes and effects (FMEA)

Marine Collisions

- Ship-ship and ship-structure impacts
- Cargo protection
- Bridge pier protection

Pollution Abatement

- Ballast water management
- Vapor control; VOC and combustion
- Shipboard oil pollution emergency plans (SOPEP)
- Shipboard wastes, incineration and sanitation



Reputation



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