



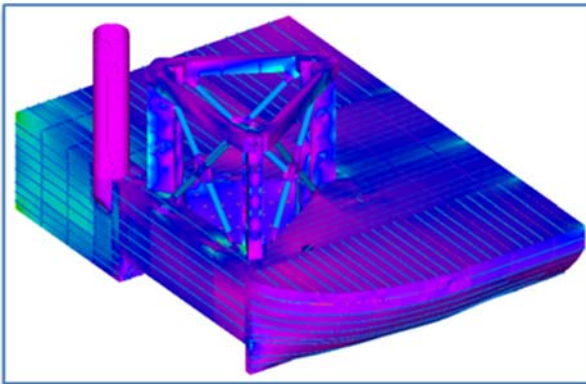
Techwise Offshore Consultancy

Who are we?

- Techwise Offshore Consultancy provides design & engineering, marine assurance and project consultancy services to the marine, offshore oil & gas and renewable energy industries.
- Our people consist of highly qualified naval architects, structural engineers, geotechnical engineers, master mariners, marine engineers and dynamic positioning specialists.
- We are headquartered in Singapore with experienced marine surveyors based in Malaysia, Indonesia, Thailand, Vietnam, Myanmar and China.
- Our vision is to be the leading marine, offshore and engineering consultant in the Asia Pacific region.
- Our mission is to provide high-quality services and cost-effective solutions to our clients.
- Our company values are **V**alue-adding, **I**nnovative and **E**fficient (**VIE**).

Our Services

Design & Engineering



- Structural Engineering
- Naval Architecture
- Vessel Detailed Design
- Rig Modification
- T & I Engineering
- Geotechnical Engineering

Marine Assurance



- Vessel Surveys
- Dynamic Positioning Services
- Marine Operations
- Rig Mover and Tow Master
- Marine Warranty Survey
- Client Representation

Project Consultancy



- Marketing & Bidding
- Project Management
- Construction Supervision
- Dry and Wet Tow Solutions
- Offshore Decommissioning
- Vessel Brokerage

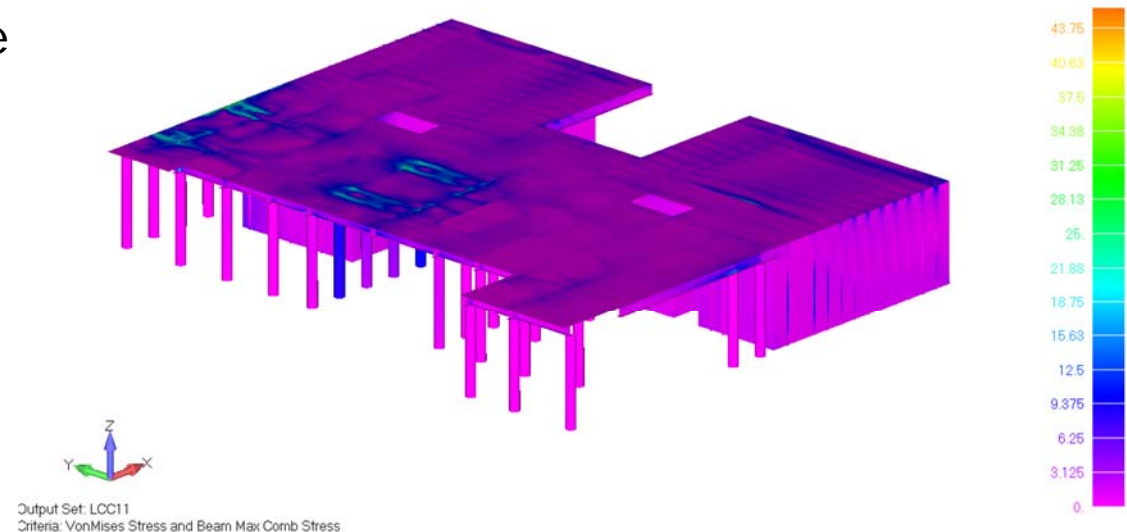
Our Clients

- Oil & gas companies
- Fabrication yards
- EPCIC contractors
- Drilling contractors
- Marine contractors
- T & I contractors
- Vessel / rig owners
- Shipping companies
- Freight forwarders
- Underwriters



We have a team of experienced structural engineers providing the following services:

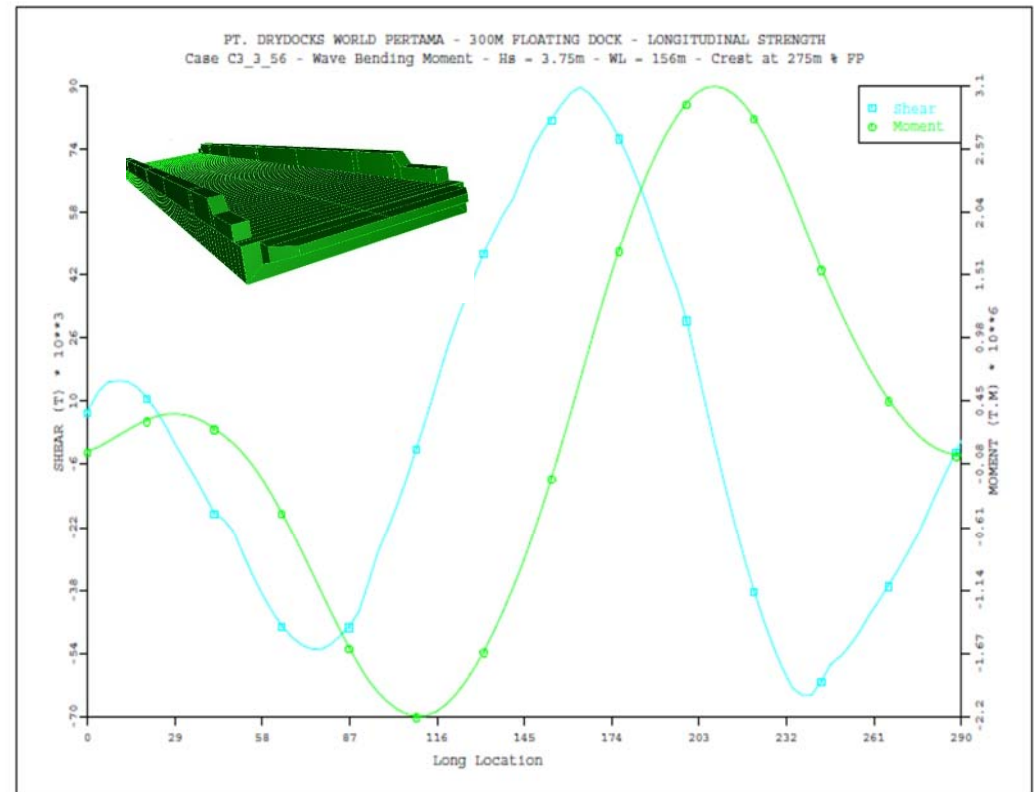
- Global strength analysis
- Local strength verification
- Structural optimization
- Reinforcement design
- Non-linear analysis
- Fatigue analysis
- Impact analysis
- Vibration analysis



Vessel Deck Local Strength Verification
Nov. 2019

Techwise provides the following Naval Architectural engineering services:

- Vessel intact and damaged stability analyses
- Motion analysis
- Mooring and riser analyses
- Inclining experiment and dead weight survey
- Ballasting calculation
- Vessel loading program
- Simulation of marine operations

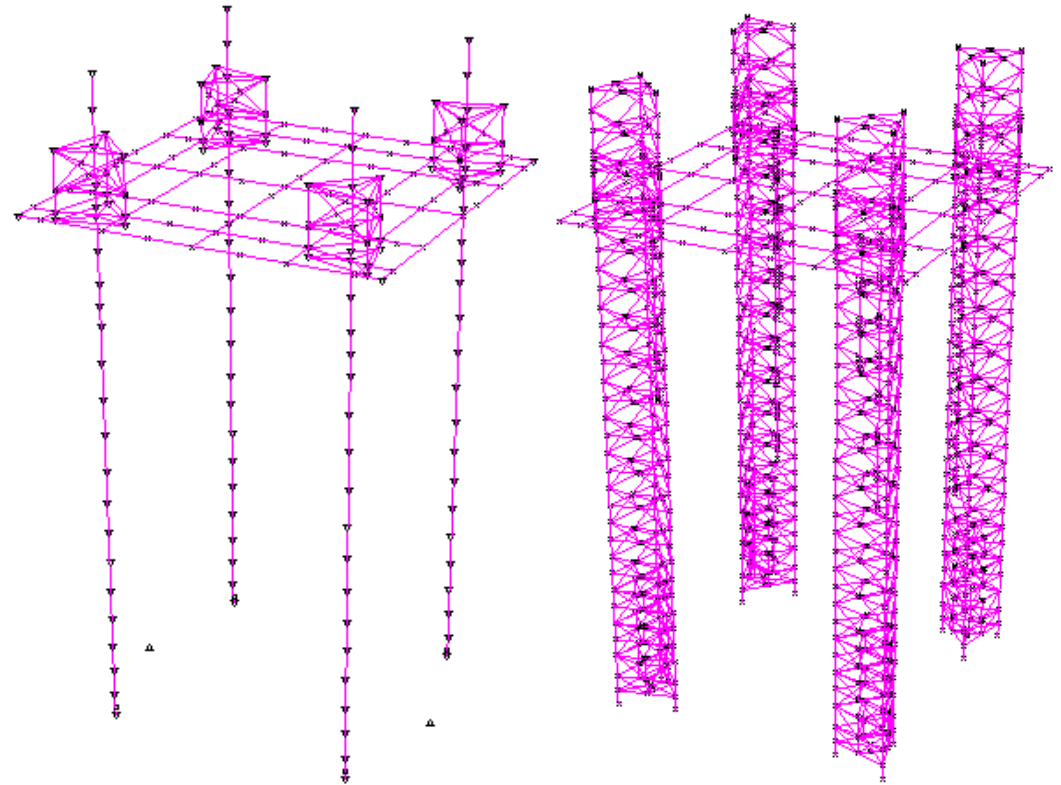


Floating Dock Wave Bending Moment Check
May 2019

Jack-up Engineering

We offer a wide range of jack-up engineering services including:

- Derivation of environmental loads
- Interaction between hull and legs
- Leg and spud-can analyses
- Hull and super structure analyses
- Cantilever analysis
- Drill floor & substructure analyses
- Fatigue life extension study
- Leg penetration analysis
- Site specific assessment



Jack up Global Strength Analyses
Aug. 2018



Seafastening Design of Cable Tank and Reels
April 2018

Techwise provides the following engineering services related to transportation and installation:

- Loadout analysis
- Lifting analysis
- Rigging design
- Seafastening design
- Transportation analysis
- Towing analysis
- Jacket launch analysis
- Topside float-over analysis

Offshore Wind Farm Consultancy

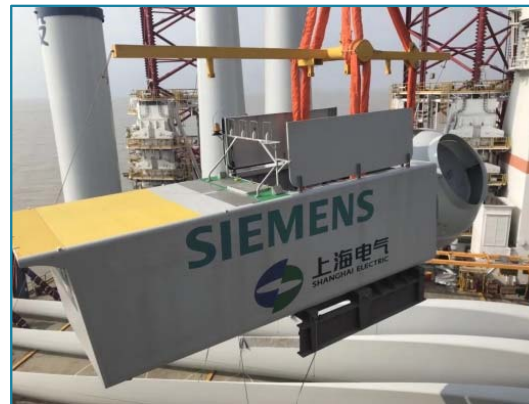
- Survey planning, management & supervision
- Geotechnical assessment
- Foundation design
- Trenching and burial assessment
- Cable laying analysis
- Substation design
- Evaluation and inspection of installation vessels
- Transportation and installation engineering



Binhai North H2 Offshore Wind Farm Project

Techwise Scope of Work

- Geotechnical assessment
- Site Specific Assessment of the installation vessel
- Stowage plan and seafastening design
- Intact and damaged stability analyses
- Procedures and analyses for transferring and installation of the turbines
- Project execution plan



Offshore Wind Farm Installation Engineering
Apr. – Oct. 2017



We can perform the following geotechnical analyses for both oil & gas and renewable energy sectors.

- Geotechnical assessment
- Foundation and pile design
- Pile driveability analyses
- Pipeline routing optimization
- Trenching and burial assessment
- Pipeline stability analysis

Vessel Surveys

Our very experienced marine surveyors can perform various types of vessel surveys:

- Suitability survey
- Condition survey
- On/off hire survey
- Pre-purchase survey
- Fuel consumption survey
- Safety audit
- Vessel valuation
- IMCA CMID survey
- OCIMF OVID inspection



AHTS Suitability Survey
May 2019

Dynamic Positioning (DP) Services



DP FMEA Verification Trials
Apr. 2018

We offer the following DP related services:

- DP FMEA/FMECA
- DP FMEA gap analysis
- DP Anntrials
- DP assurance audit
- Five-yearly DP renewal trials
- DP operations manual
- DP design review and redundancy analysis
- Activity Specific Operating Guidelines (ASOG)

Marine and DP Assurance Audit

Our Marine and DP Assurance Audit Programme is designed to cover the following aspects of DP vessels:

- General vessel conditions
- Vessel certificates and documentation
- Functioning tests of major equipment
- DP documentation and trials
- Competency assessment of key crew members and DP operators



PSV Marine and DP Assurance Audit
Apr. 2019

Marine Warranty Survey

All our key personnel have more than 10 years working experience with world leading MWS companies. We provide independent MWS services for

- Loadout, transportation and installation of offshore fixed platforms, floaters and subsea structures
- Handling of project cargoes
- Wet tow and dry tow of rigs
- Offshore renewable projects
- Offshore decommissioning



Barge Towage Approval
Jan. 2017



Jack-up Rig Move
Dec. 2019

Our marine team have substantial experience in offshore installation and marine operations. We have been working closely with oil majors, rig owners and marine contractors in provision of

- Rig movers
- Tow masters
- Mooring masters
- Marine advisors
- Marine coordinators
- Marine representatives

Life-cycle Project Consultancy



We have an excellent client network across oil companies, vessel owners, shipyards, drilling and marine contractors in the Asia Pacific region.

All of our key personnel have worked throughout the different stages of offshore projects.

We offer full life-cycle consultancy services to our clients from marketing, bidding, contract negotiation to EPCIC project execution and decommissioning.

Marketing and Bidding

Through our existing client network, we assist our clients on:

- Business development
- Marketing intelligence
- Client networking
- Marketing campaign
- Reviewing tender documents
- Preparing technical proposals
- Providing engineering support during bidding
- Assisting on technical clarifications



Construction Supervision

For newbuilding, upgrading and modification projects, we can provide a full site team to supervise the construction on behalf of the owner:

- Project management
- Planning and progress monitoring
- Engineering review
- QA/QC and site inspection
- Testing and commissioning
- As-built documentation



Dry and Wet Tow Solutions



We work closely with major semi-sub HLV and towing tug owners to provide the most cost-effective dry and wet tow solutions based on:

- Our access to a large number of HLVs and towing tugs with their locations, availability and suitability
- Our engineering expertise and marine operation experience in dry and wet tows
- Our thorough understanding of the MWS requirements

Decommissioning



With our offshore engineering expertise and marine operation experience, we provide unique supports to our clients on decommissioning projects.

- Feasibility study
- Conceptual design
- Vessel suitability assessment
- Site inspection
- Offshore removal and transportation
- Onshore dismantling
- Green recycling consultancy



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