

SUBMARINE ENGINEERING CONSULTANCY SHIPBUILDING INDUSTRY AND TRADING CO. Ltd. has provided architectural, engineering and design services to the maritime industry since 2006. Submarine founded by 3 naval architecture who has a goal to combine the experience gained from design-production-repair-maintenance and conversion of different types of vessels with the latest computer technology in order to provide solutions of the highest quality. By using the opportunities of high technology, guarantees a reliable and fast work with well-experienced engineering team. Submarine has the ability to work on a grand range of product by means of different kinds of services. Our products and services include the following items:

- Project development and contract design
- Detail design and documentation
- Inspection and Survey

Project Development And Contract Design

Service for project management and planning include:

- Initial design
- Conceptual studies, Feasibility studies, Optimisation, Cost benefit analysis.
- Bidding documents
- Technical specifications
- General arrangements
- Tender evaluation
- Contract negotiation

Detailed Design And Documentation

Service for detailed design and documentation include:

Analysis

- Linear and non-linear hydrodynamic analysis;
- Intact and damage stability analysis,
- Speed and power predictions
- Structural design and calculations
- P&ID Diagrams
- Flow, Heat Analysis
- Ventilation Design and Analysis
- Ergonomy Analysis
- Global and local finite element analysis
- Vibration analysis
- Noise analysis
- Determination of classification rule scantlings
- Material and outfit lists and weight analysis
- Interior design
- Manoeuvring, Speed/Power and Rudder Analysis

Documentation

- 2D Drawings
- 3D Structural Model
- Instruction books and manuals

- Structural workshop documentations including part lists, bending templates, profile sketches NC codes etc.
- 3D outfitting model including piping, ventilation, cable trays etc.
- Outfitting workshop documentation including piping isometrics
- Equipment specifications

Inspection And Survey

- Ship inspection
- Class record inspection
- Trial and Harbour Tests, Protocols
- Inclining Experiment
- Management of new construction and conversion projects
- Final Stability & Strength Calculations
- Damage Stability Calculations
- Onsite building survey
- Design approval

REFERENCES

- ❖ **M/V SHEANNE** 61,9 m Pelagic Trawler for **SEDEF** shipyard.
 - 3D Structural model by Tribon M 1,4 Hull including workshop documentantation for hull yard.(Part lists, bending templates, profile sketches NC codes.)
- ❖ **S/Y MALTESE FALCON** 87m sailing yacht for **YILDIZ** shipyard.
 - 3D structural model by Tribon M1.4 Hull module to use for 3d outfitting model
- ❖ **M/V PROVIDNECE** 1650 TEU Container Vessel for **ÇEKSAN** shipyard.
 - The vessel has been damaged in double bottom area approx. 40m length.
 - Project management
 - Workshop drawings for block renewal
 - Workshop drawings for local repair
 - Procedures for block renewal
- ❖ **M/T STOCKREGINA** 4320 DWT IMO II OIL/CHEMICAL TANKER for **ÇEKSAN** shipyard.
 - Detailed contractual building specification
 - 3D Structural model by Tribon M 1,4 Hull including workshop documentantation for hull yard.(Part lists, bending templates, profile sketches NC codes.)
 - Technical support for production.
- ❖ **M/T STOCKPETRA** 4320 DWT IMO II OIL/CHEMICAL TANKER for **ÇEKSAN** shipyard.
 - Detailed contractual building specification
 - 3D Structural model by Tribon M 1,4 Hull including workshop documentantation for hull yard.(Part lists, bending templates, profile sketches NC codes.)
 - Technical support for production.
- ❖ **M/Y CARESSA** K 36.7m motor yacht for **RMKMARINE** shipyard.
 - Detailed contractual building specification
 - 3D Structural model by Tribon M 1,4 Hull including workshop documentantation for hull yard.(Part lists, bending templates, profile sketches NC codes.)
 - Technical support for production.
- ❖ **M/T SCANVIK** 8300 DWT IMO II OIL/CHEMICAL TANKER for **RMKMARINE** shipyard.
 - Lines fairing.
 - 3D Structural model by Tribon M 1,4 Hull including workshop documentantation for hull yard.(Part lists, bending templates, profile sketches NC codes.)
 - Technical support for production.

- ❖ **M/T KUNGSVIK** 8300 DWT IMO II OIL/CHEMICAL TANKER for **RMKMARINE** shipyard.
 - 3D Structural model by Tribon M 1,4 Hull including workshop documentation for hull yard.(Part lists, bending templates, profile sketches NC codes.)
 - Technical support for production.

- ❖ **M/T WITCHALLENGER** 4450 DWT Coastal Tanker For Oil Products for **TUZLA GEMİ** shipyard.
 - 3D Structural model by Tribon M 1,4 Hull including workshop documentation for hull yard.(Part lists, bending templates, profile sketches NC codes.)
 - Technical support for production.

- ❖ **M/T WITCHAMPION** 4450 DWT Coastal Tanker For Oil Products for **TUZLA GEMİ** shipyard.
 - 3D Structural model by Tribon M 1,4 Hull including workshop documentation for hull yard.(Part lists, bending templates, profile sketches NC codes.)
 - Technical support for production.

- ❖ **M/T GUYENNE** 11336 DWT IMO II OIL/CHEMICAL TANKER for **RMKMARINE** shipyard.
 - Lines fairing

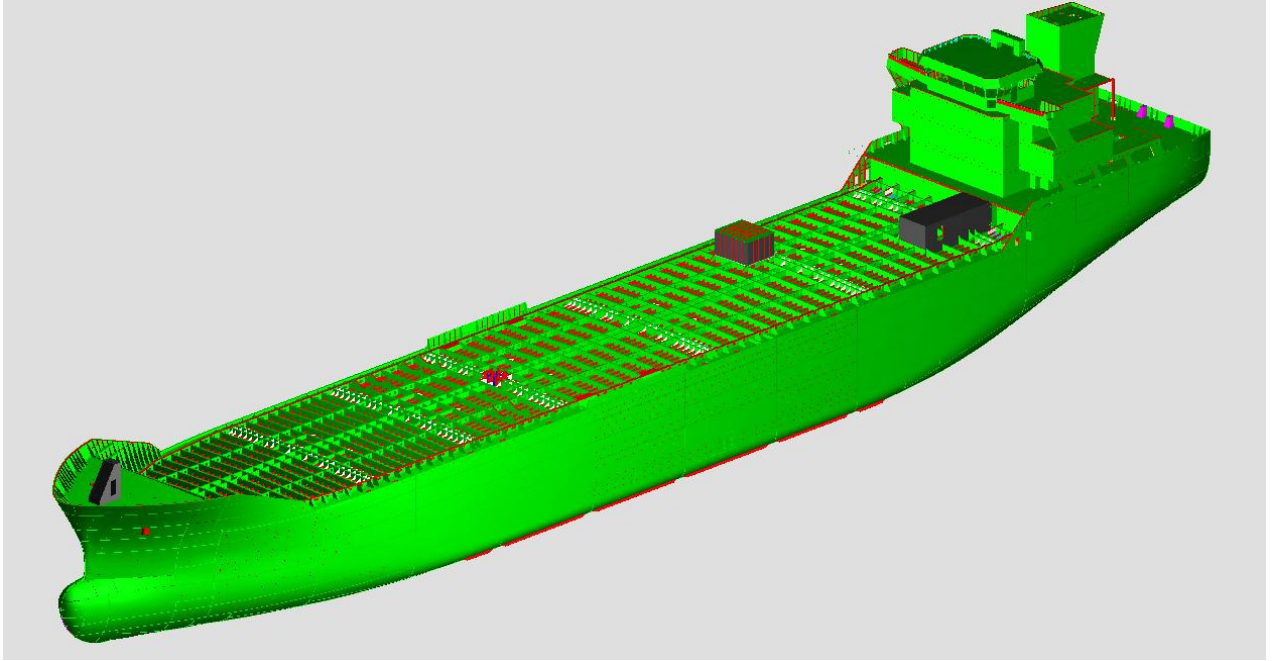
- ❖ **M/T VEMAOIL IX** 5000 DWT OIL TANKER for **TORGEM** shipyard.
 - Double hull conversion apx.200t .New inner side constructing and increase of tanktop height to meet the requirements of MARPOL73/78 Regulation 13F.
 - Project Management
 - Workshop Drawings for new inner hull and tanktop pannel.
 - New arrangement for heating coils, cargo line.
 - Execution of all tank tests and inclining experiment.
 - Drydocking service for special survey.

- ❖ **M/F SAMSUN** 10500 GRT ferry for **TORGEM** shipyard.
 - Steel conversion project apx. 120t. Extending upper three deck for new restaurant, fitness centre and swimming pool.
 - Project Management.

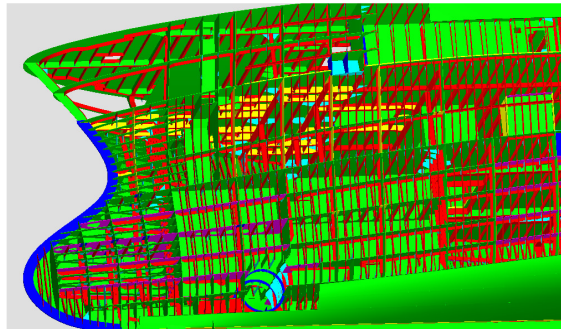
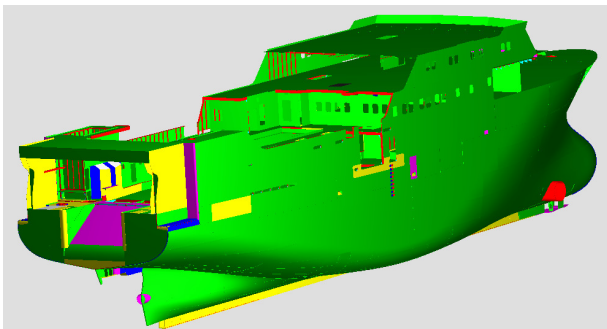
- ❖ **NB076** 5850 DWT OIL/CHEMICAL TANKER for **TORGEM** shipyard
 - Hull and outfitting equipment arrangement and foundation design and manufacturing

- ❖ **M/T AZIZ TOPSAKAL** 5850 DWT OIL PRODUCT TANKER for **TORGEM** shipyard
 - Hull and outfitting equipment arrangement and foundation design and manufacturing
- ❖ **M/T BULUKLU** 5850 DWT OIL/CHEMICAL TANKER for **TORGEM** shipyard
 - Hull and outfitting equipment arrangement and foundation design and manufacturing
- ❖ **M/T MAJORQUE** 3300 DWT OIL PRODUCT TANKER for **TORGEM** shipyard
 - Hull and outfitting equipment arrangement and foundation design and manufacturing
- ❖ **M/T KEREM D** 5750 DWT OIL PRODUCT TANKER for **TORGEM** shipyard
 - Project Management
- ❖ **NB01** 20000 DWT OIL/CHEMICAL TANKER for **SOLI** shipyard.
 - 3D Structural model by Tribon M 3 Hull including workshop documentantation for hull yard.(Part lists, bending templates, profile sketches NC codes.)
- ❖ **NB04** 5850 DWT OIL/CHEMICAL TANKER for **SOLI** shipyard.
 - 3D Structural model by Tribon M 3 Hull including workshop documentantation for hull yard.(Part lists, bending templates, profile sketches NC codes.)
- ❖ **S/Y MUMU** 39 m sailing yacht for **R.B DERELI YACHTS**.
 - On site building survey.

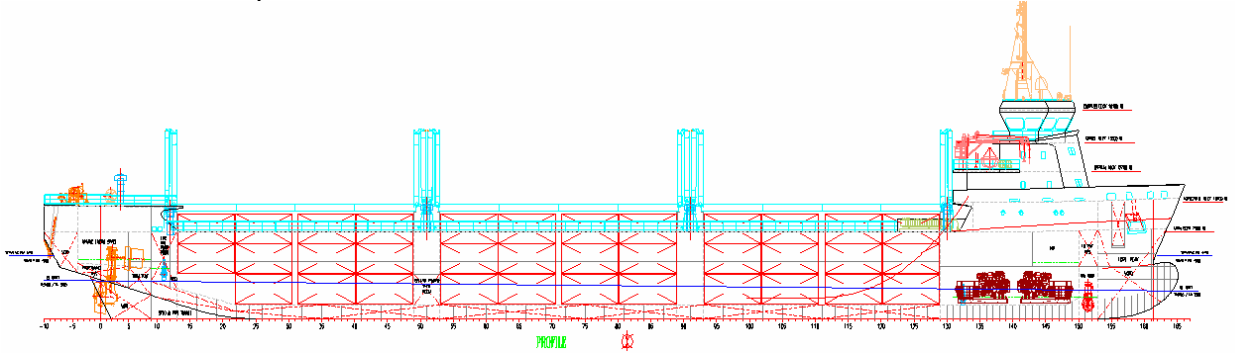
- ❖ **M/T CASTILLO DE MERIDA** 14800 DWT IMO II OIL/CHEMICAL TANKER for TVK shipyard.(6 sisterships)
 - 3D Structural model by Aveva&Tribon Hull including workshop documentantation for hull yard.(Part lists, bending templates, profile sketches NC codes.)
 - Technical support for production.
 - As built drawings for class approval.



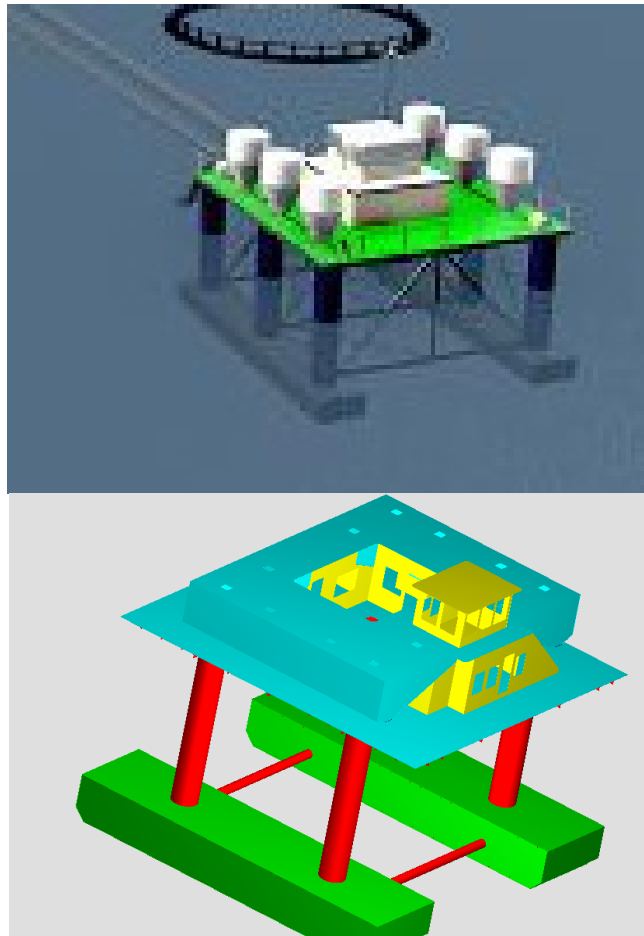
- ❖ **NB15** 70m TRAWLER for ÖZATA SHIPYARD
 - 3D Structural model by Aveva&Tribon Hull including workshop documentantation for hull yard.(Part lists, bending templates, profile sketches NC codes.)
 - Technical support for production.
 - As built drawings for class approval.



- ❖ **NB100** 5000 DWT MULTIPURPOSE VESSEL Pre-Design for TORGEM SHIPYARD
 - Pre-Calculations and form design
 - Structural Design and arrangements.
 - Technical Spec.

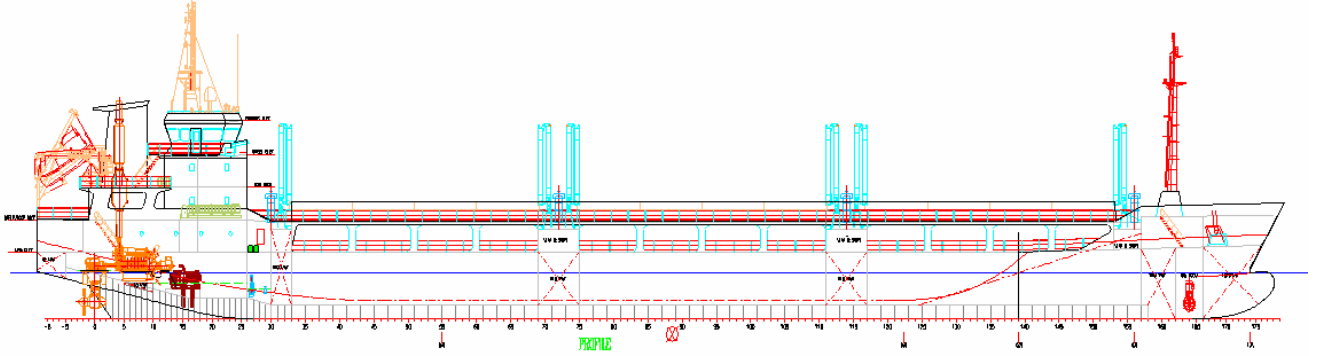


- ❖ **P001** 90t FISHING FARM FEEDING BARGE Pre-Design for TECHAQUA
 - Pre-Calculations
 - Structural Design and arrangements.
 - Technical Spec.



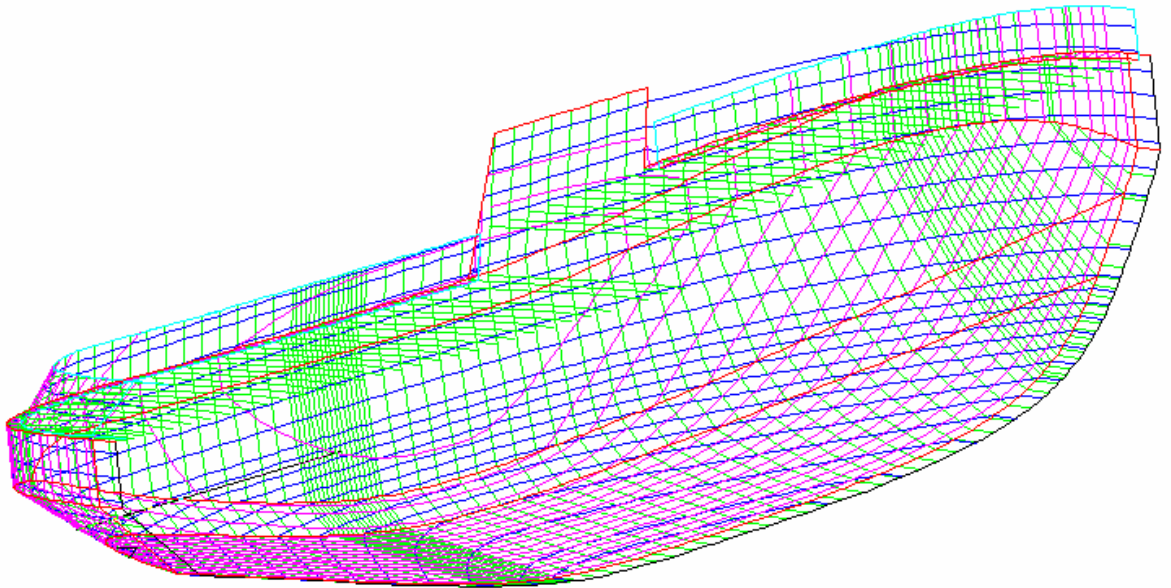
❖ **NB00** 4500 DWT SHALLOW DROUGHT GENERAL CARGO Pre-Design for TORHAN SHIPPING

- Pre-Calculations and form design
- Structural Design and arrangements.
- Technical Spec.

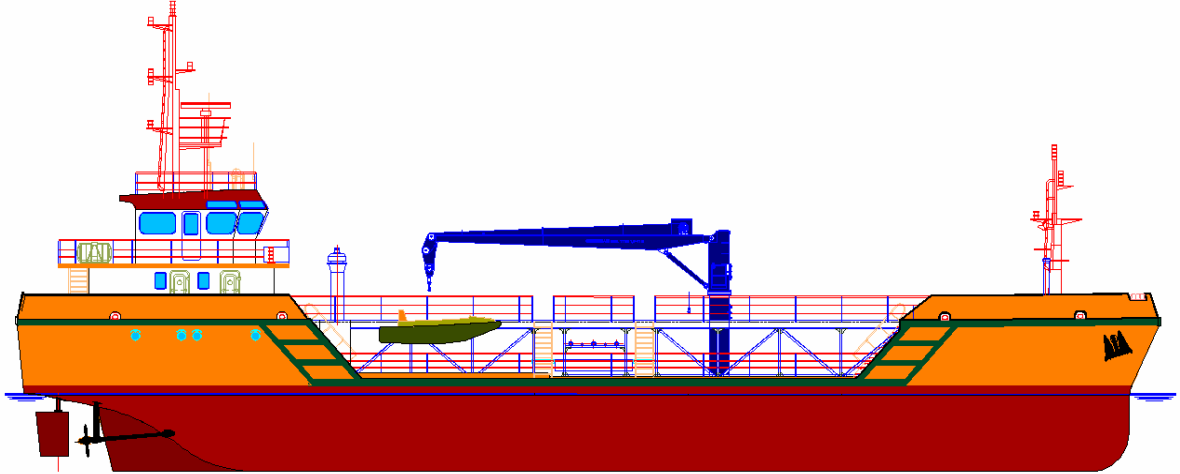


❖ **NB26** TUGBOAT surface fairing for UZMAR SHIPYARD

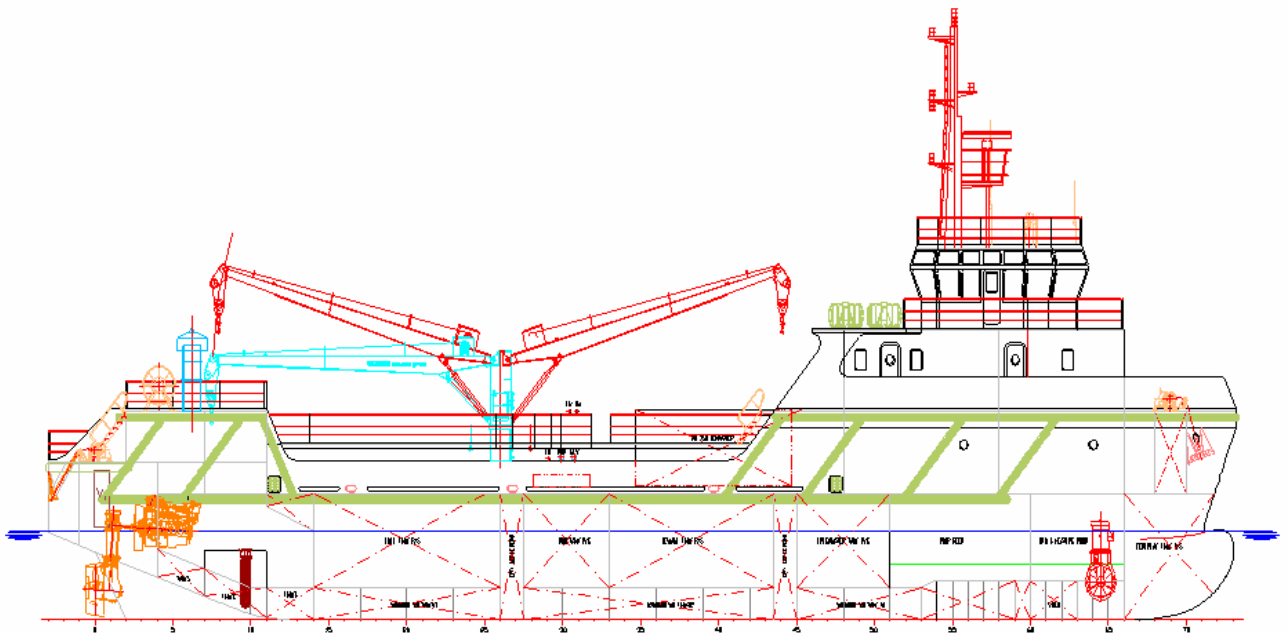
- Fairing
- Seem arrangement.
- Shell Expansion



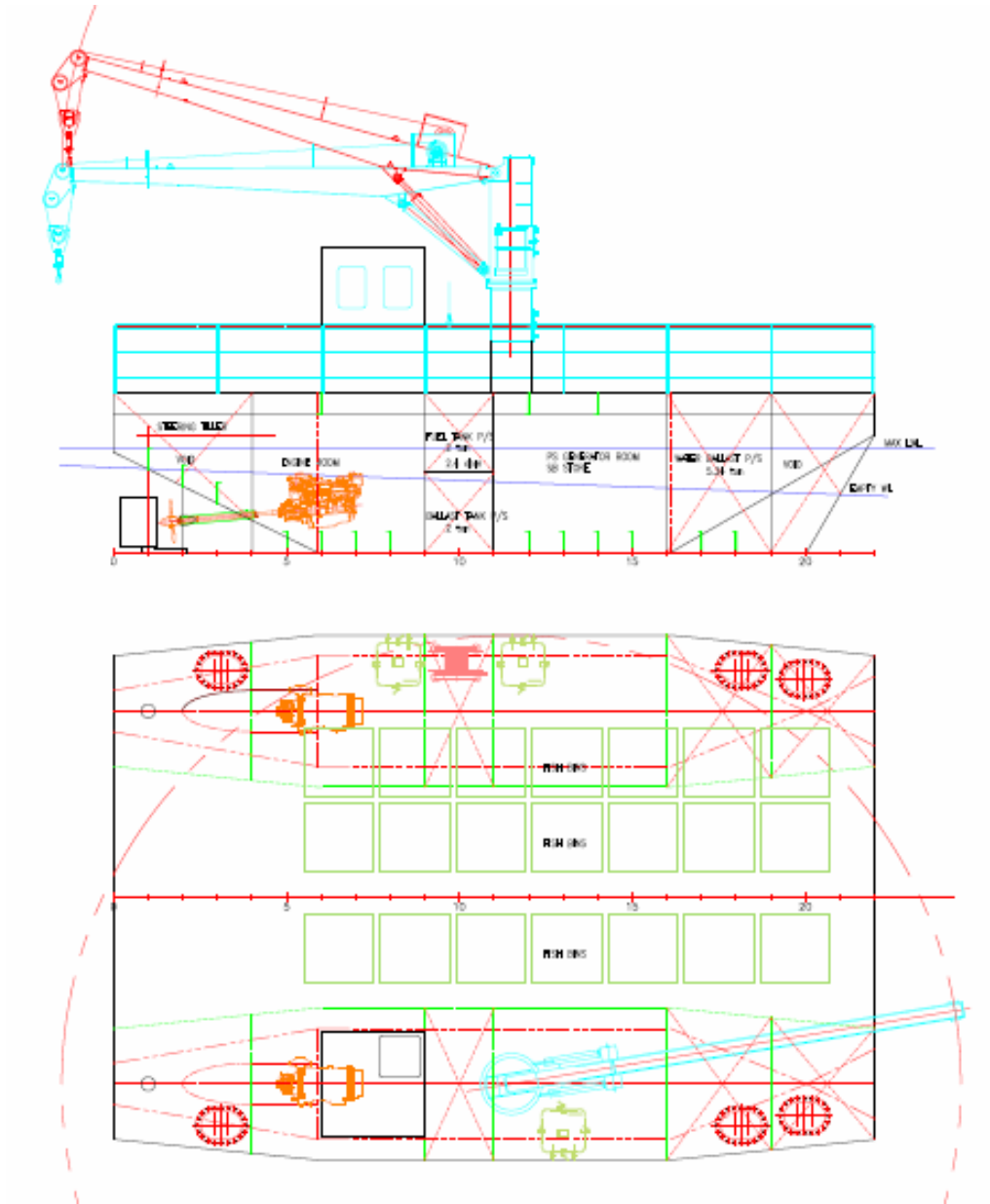
- ❖ **P002** 470 DWT IMO III COASTAL SERVICE TANKER Pre-Design
 - Pre-Calculations and form design
 - Structural Design and arrangements.
 - Technical Spec.



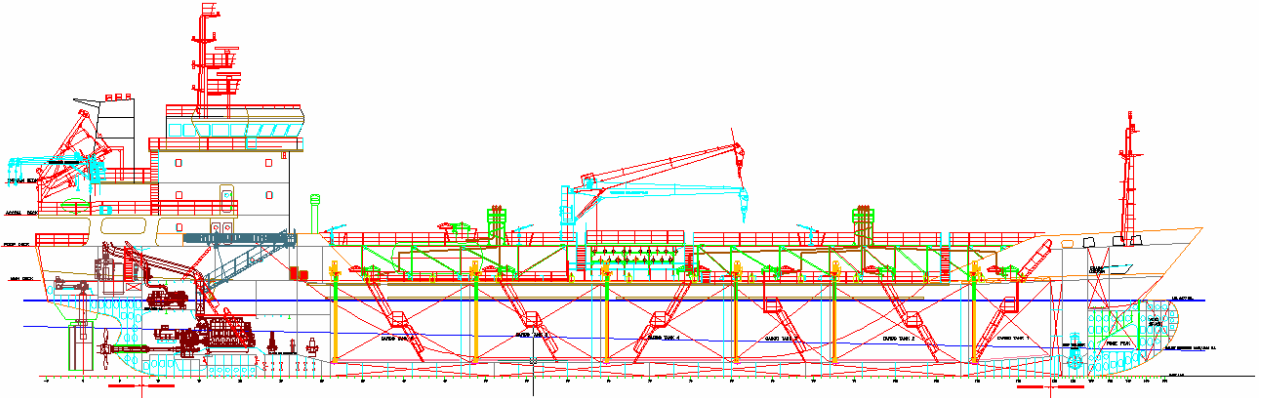
- ❖ **P003** 550 DWT OFFSHORE LIQUID SUPPLY VESSEL Pre-Design
 - Pre-Calculations and form design
 - Structural Design and arrangements.
 - Technical Spec.



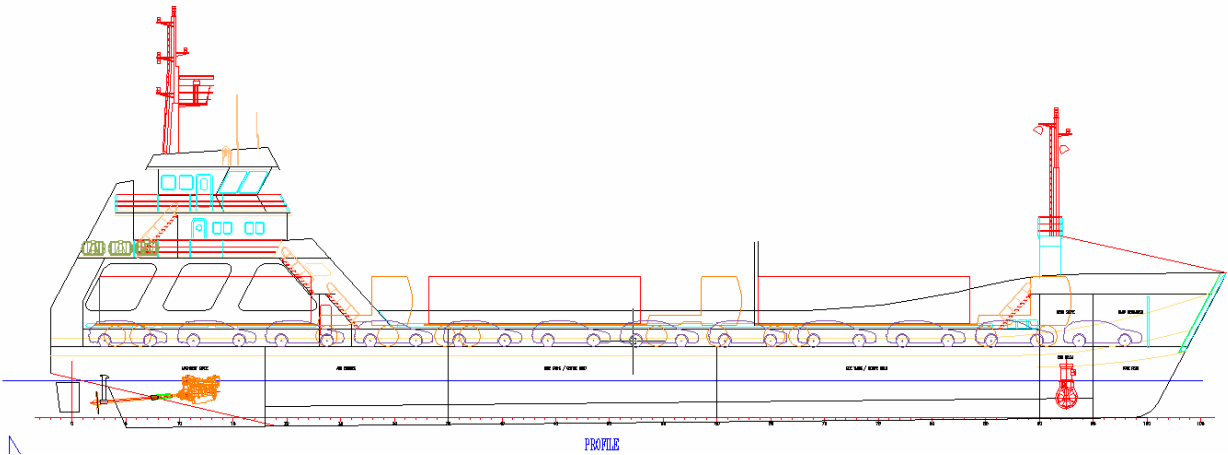
- ❖ **P004 LAKE FARM SERVICE CATAMARAN Pre-Design**
 - Pre-Calculations and form design
 - Structural Design and arrangements.
 - Technical Spec.



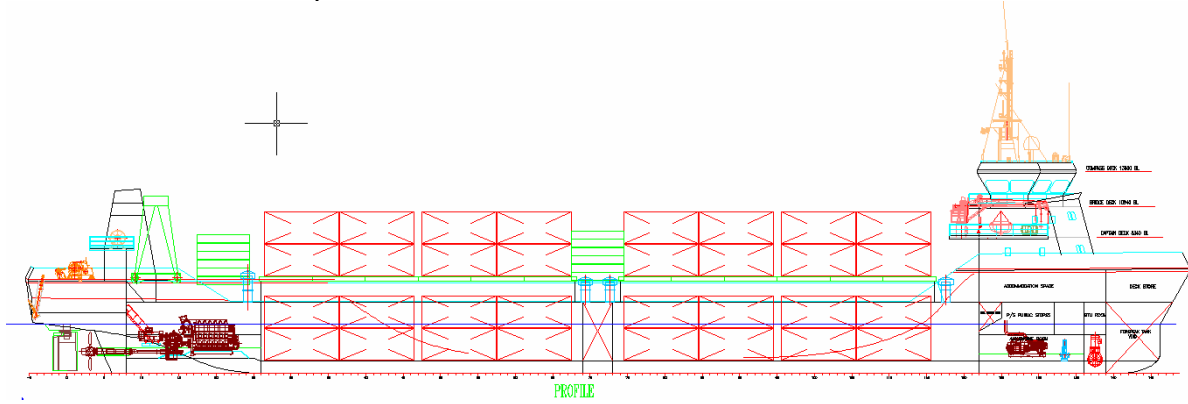
- ❖ **P105** 4080 DWT IMO II CHEMICAL TANKER Pre-Design
 - Pre-Calculations and form design
 - Structural Design and arrangements.
 - Technical Spec.



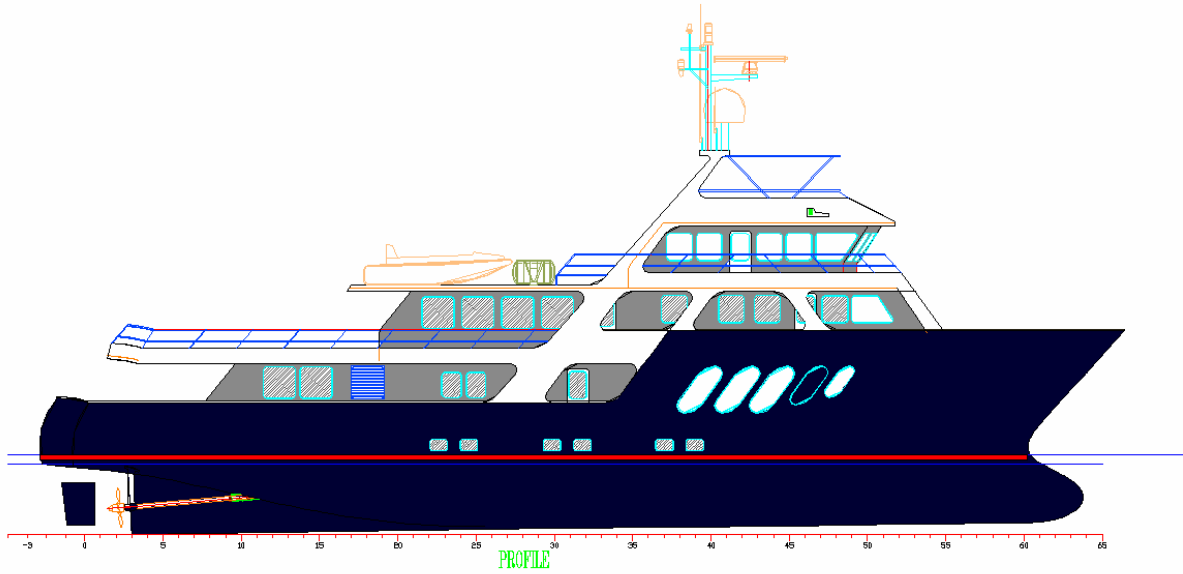
- ❖ **P106** 65m CAR FERRY Pre-Design
 - Pre-Calculations and form design
 - Structural Design and arrangements.
 - Technical Spec.



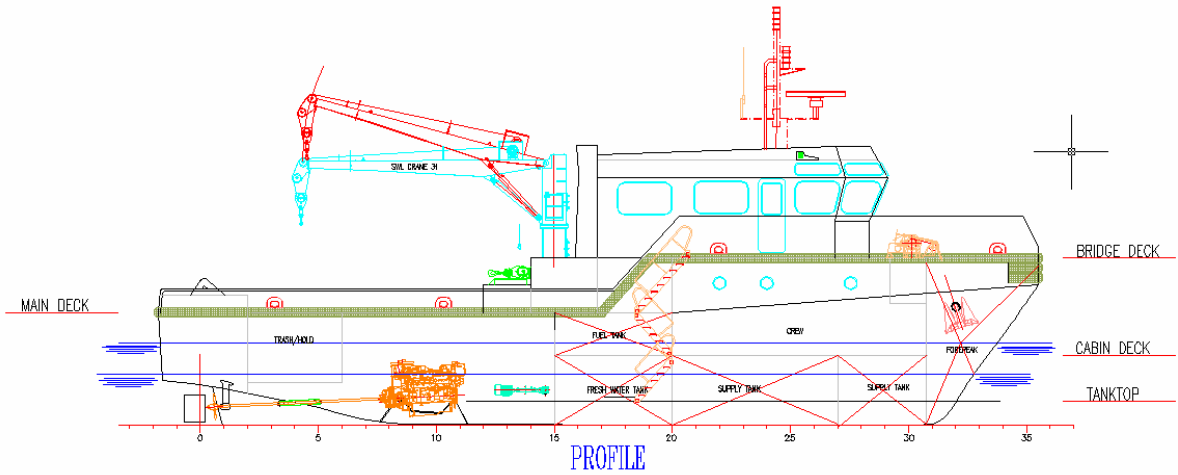
- ❖ **P107** 3100 DWT COASTER Pre-Design
 - Pre-Calculations and form design
 - Structural Design and arrangements.
 - Technical Spec.



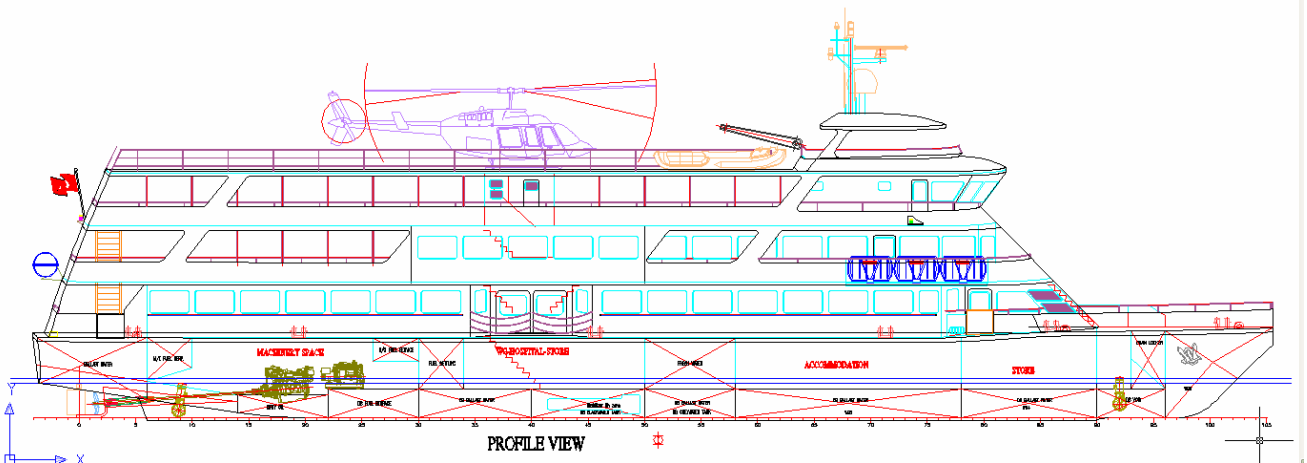
- ❖ **P111** 35m TRAWLER YACHT
 - Pre-Calculations and form design
 - Structural Design and arrangements.
 - Technical Spec.



- ❖ **P112 22M SERVICE VESSEL**
 - Pre-Calculations and form design
 - Structural Design and arrangements.
 - Technical Spec.

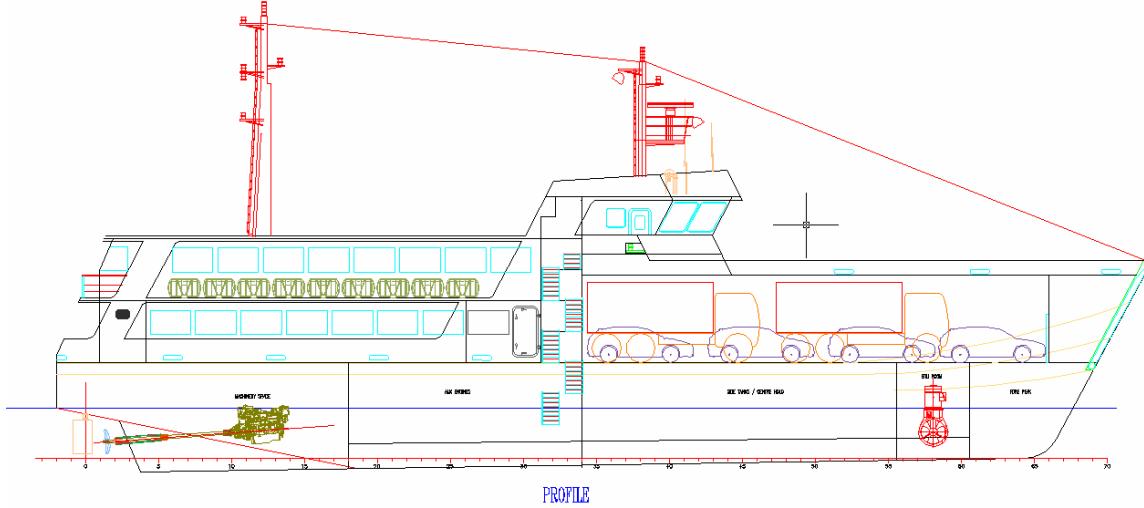


- ❖ **P113 54m PASSENGER VESSEL**
 - Pre-Calculations and form design
 - Structural Design and arrangements.
 - Technical Spec.



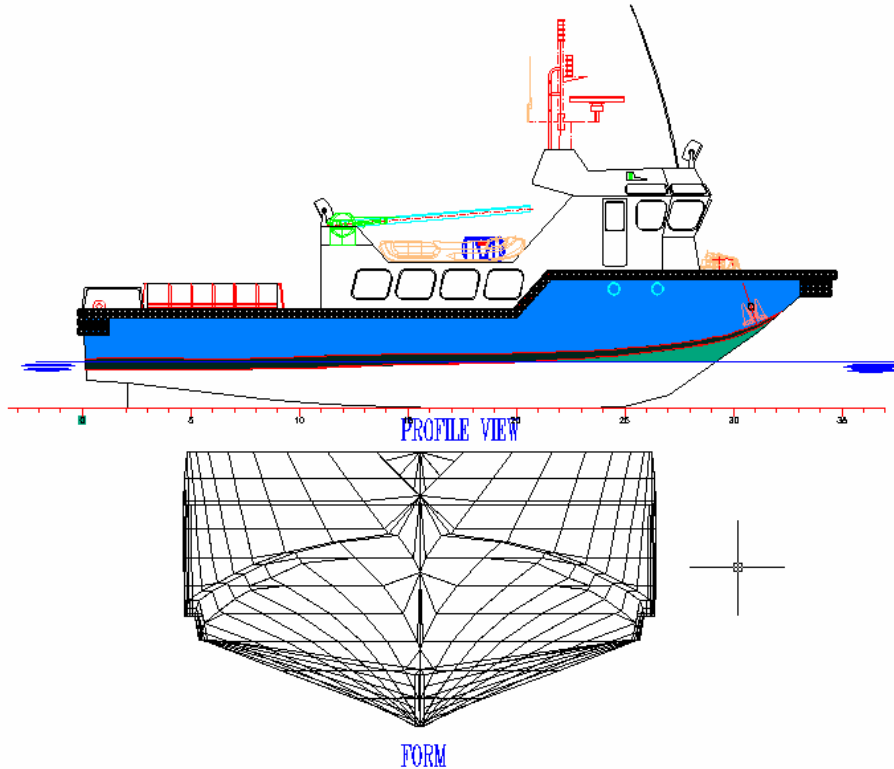
❖ **P119** 45m CAR FERRY

- Pre-Calculations and form design
- Structural Design and arrangements.
- Technical Spec.

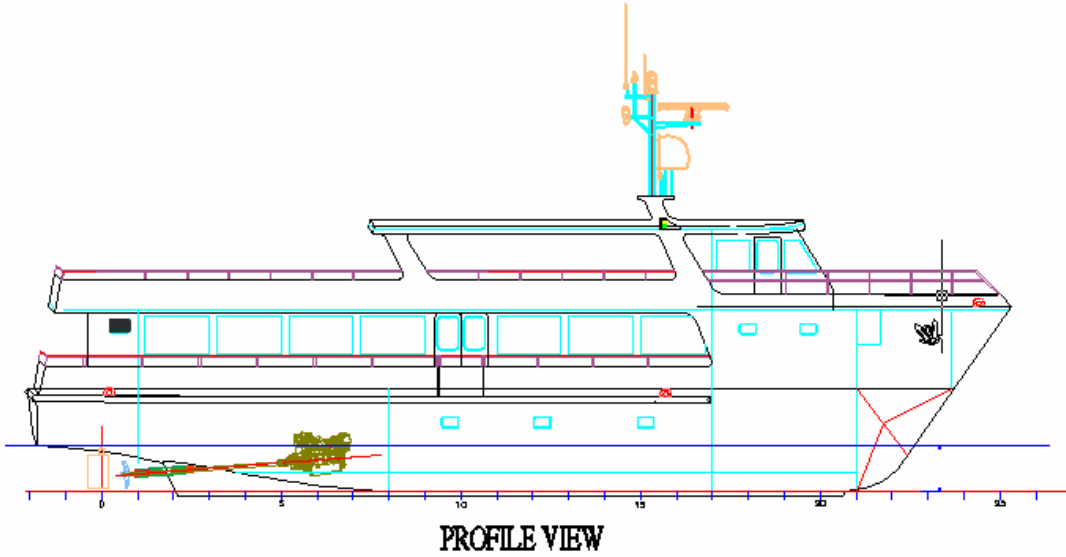


❖ **P121** FAST CREW BOAT

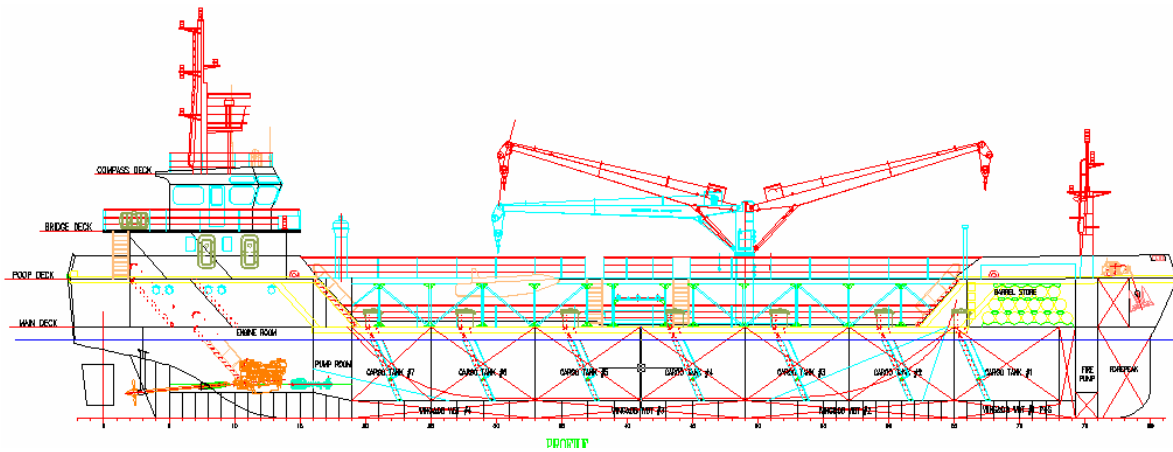
- Pre-Calculations and form design
- Structural Design and arrangements.
- Technical Spec.



- ❖ **P124** 26m RESTAURANT VESSEL
 - Pre-Calculations and form design
 - Structural Design and arrangements.
 - Technical Spec.



- ❖ **P127** 600t OIL BUNKER
 - Pre-Calculations and form design
 - Structural Design and arrangements.
 - Technical Spec.



TECHNICAL TEAM

Hakan Tüfekçi

Naval Architect and Marine Eng. (İ.T.Ü / 1999)

Ship inspection
On site building survey
Technical specifications
General arrangements
Structural design and calculations
Global and local structural analysis
Determination of classification rule scantlings
Intact and damage stability analysis
Structural 3D Model
Project Management and planning
Hull outfitting drawings

H.Koray Nurtug

Naval Architect and Marine Eng. (İ.T.Ü / 2000)

Ship inspection
On site building survey
Technical specifications
General arrangements
Structural design and calculations
Global and local structural analysis
Determination of classification rule scantlings
Intact and damage stability analysis
Structural 3D Model
Project Management and planning
Hull outfitting drawings

G.Sinemis Türkcan

Naval Architect and Marine Eng. (İ.T.Ü / 2000)

Ship inspection
On site building survey
Technical specifications
General arrangements
Structural design and calculations
Global and local structural analysis
Determination of classification rule scantlings
Intact and damage stability analysis
Structural 3D Model
Project Management and planning
Hull outfitting drawings

Dogan Özdemir
(Special Education Essex Deaf School/1968)

Basic and Structural Design
Technical specifications
General arrangements
Structural design and calculations
Global and local structural analysis
Determination of classification rule scantlings
Intact and damage stability analysis
Prediction of speed via power analysis
Hull and outfitting 3D Model
Project Management and planning
Hull outfitting drawings

Aslıhan Kıyınat (İ.T.Ü/2009)
Naval Architect & Marine Engineer

3D Structural model
2D drawings
Nestings

Oktay Yolcu (İ.T.Ü/2009)
Naval Architect & Marine Engineer

3D Structural model
2D drawings
Nestings

Osman Şenkaya (Pendik Anatolia Maritime High School/2004)
Technician

3D Structural model
2D drawings
Nestings

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