

Basic Design

Hull Construction

System & Outfitting

FEM Analysis

ProDuction Drawing

Proj. Management & Supervision

3D Visualization

Virtual moDEL test

Engineering Retrofit Inst. Of Ship Comp.



CONTACT US



AMG Tower

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www.terafulk.com

OUR SERVICES

BASIC DESIGN

HULL CONSTRUCTION

SYSTEM & OUTFITTING

FEM ANALYSIS

PRODUCTION DRAWING

PROJ. MANAGEMENT &
SUPERVISION

3D VISUALIZATION

VIRTUAL MODEL TEST

ENGINEERING RETROFIT INST.
OF SHIP COMP.

TERAFULK MEGANTARA DESIGN



ABOUT US

We are advanced ship designer. Every ship engineered with the most sophisticated softwares and experienced engineers. Proven and trusted by domestic and overseas shipyards and end users.

Terafulk was established in November 2005 in Surabaya city of Indonesia, specializing in Ship Design, Construction, Project Management and Consulting.

Since then we have successfully delivered hundred of ship design of various types and sizes

and participated in ship building projects in Indonesia and abroad.

Ir. Edy Widarto, M. Eng
(President Director)

Ir. Toni Martino H B, M. MT
(Director)



OUR CLIENT

PT. Tri Ratna Diesel

PT. Citra Shipyard

PT. Samudra Marine Indonesia

PT. Dumas Tanjung Perak Shipyard

PT. Usda Seroja Jaya

PT. Batamec

PT. Palma Progress Shipyard

PT. Pertamina Trans Kontinental

PT. Multi Ocean Shipyard

BPPT

PT. Dok & Perkapalan Surabaya

PT. Elnusa, Tbk.

Shin Kurushima Dockyard Co. Ltd.

Sanoyas Shipbuilding Corp.

Ship Classification Malaysia

Smert Design Co. Ltd.

Tecnos Engineering Co. Ltd.

Mitsubishi Heavy Industries, Ltd.

and many more...



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CORPORATE VALUE

敬意 貢献 改善

Honor Contribution Innovation

Adopted from Japanese meanings which states courteous, contribution and innovation that reflecting our company member's mentality in performing a duty with collaborating the religious value and the high-perform work ethic.



PROJECT MANAGEMENT



Before undertaking any project we discuss with our clients in identifying the real business problem so that our solutions create value. We offer a full range of solutions during and after the project life cycle and some of these are highlighted below :

- Scoping and Feasibility Studies
- Inspection and Preparation of Dry Dock
- Specification (for Repair/Retrofit/New Build)
- Review and Approve Drawings on behalf of owners/clients



Our philosophy regarding managing and executing projects follows an integrated and holistic solutive approach where the client is at the central point of view of the project management team.



PLANNING & DESIGN DEVELOPMENT

Concept design of the proposed solutions
 Shipyard Audit and Selection – New
 Build/Retrofit/Modifications
 Engineering Estimation
 Project Scheduling

**PROJECT CLOSURE**

Generation of Final Technical Documents and Drawings
 Documenting Lesson Learned
 Issue Close-out Report
 Commissioning and Sea Trials
 Represents Inclining Experiments, Basin Trials and Sea Trials
 Arranges complete Documents/Drawings from Yard (as-build drawings)

**VALUE ADDED SOLUTIONS**

Technical Familiarization
 Condition Assessment
 Quality Assurance and Control

TENDER DOCUMENTATION & TENDER PROCESS

Prepare tender and commercial documents
 Acts as clients' counterpart to evaluate tenders process and give technical advice

**PROJECT EXECUTION**

Execution Supervision
 Contract Management and Administration
 Quality Planning, Assurance and Control
 Manage Budget and Schedule Control
 Chair and Manage Technical and Project Progress Meetings
 Owners Representatives / Dry Dock Superintendence
 Site Supervision – Structure, Outfitting, Machinery,
 Piping, Accommodation, HVAC
 Equipment Procurement / Vendor Selection
 Inspection of Incoming Materials

OUR PORTFOLIO PROJECT

A replenishment oiler or replenishment tanker is a naval auxiliary ship with fuel tanks and dry cargo holds which can supply both fuel and dry stores during underway replenishment (UNREP) at sea

**OPTIMIZE OF DECK
ACCOMMODATION**
IMPROVEMENT 1
(KRI-BONTANG)



**CONTINUOUS
IMPROVEMENT**

**BULBOUS BOW
BOW THRUSTER**
IMPROVEMENT 2
(UNDER CONSTRUCTION)

NAVY VESSEL

SHIP TYPE	CLIENT	CLASS
Fleet Tanker (BCM3)	PT. Batamec	BV
Fleet Tanker (BCM4)	PT. Batamec	BV
Landing Ship Tank	PT. Dok Kodiah Bahari	BKI
Landing Ship Tank	PT. Bandar Abadi	LR
Strategic Sealift Vessel	PT. PAL Indonesia	LR

Continuous Improvement of
Hull form
and reduce number of Deck
to reduce the weight and
increase the Speed



SPB/SPOB

SHIP TYPE	CLIENT	CLASS
SPOB 3.500 ton	NASDEC	non-class
SPOB 2.000 dwt	PT. Palma Shipyard	ABS
SPOB 5.000 ton	PT. Samudra Marine Ind.	BV
SPCB 8.000 ton (Coal)	PT. UT Pandu Engineering	BKI
SPCB 8.000 ton (Cement)	PT. Dok Perkapalan Sby	BKI
PCB 10.000 ton (Coal)	PT. Palma Shipyard	NK

WORK BARGE

SHIP TYPE	CLIENT	CLASS
Transshipment Barge	Adani Global	ABS
Work Barge 102 pax	PT. Dok Perkapalan Sby.	ABS
Work Barge - Snubbing Unit	PT. Elnusa	BKI
Work Barge - Well Maintenance	PT. Elnusa	BKI
Work Barge - Slick Line	PT. Elnusa	BKI
Work Barge - Well Maintenance	PT. Trijaya Global Marindo	RINA



PATROL

18 Meter

ALTERNATIVE DESIGN



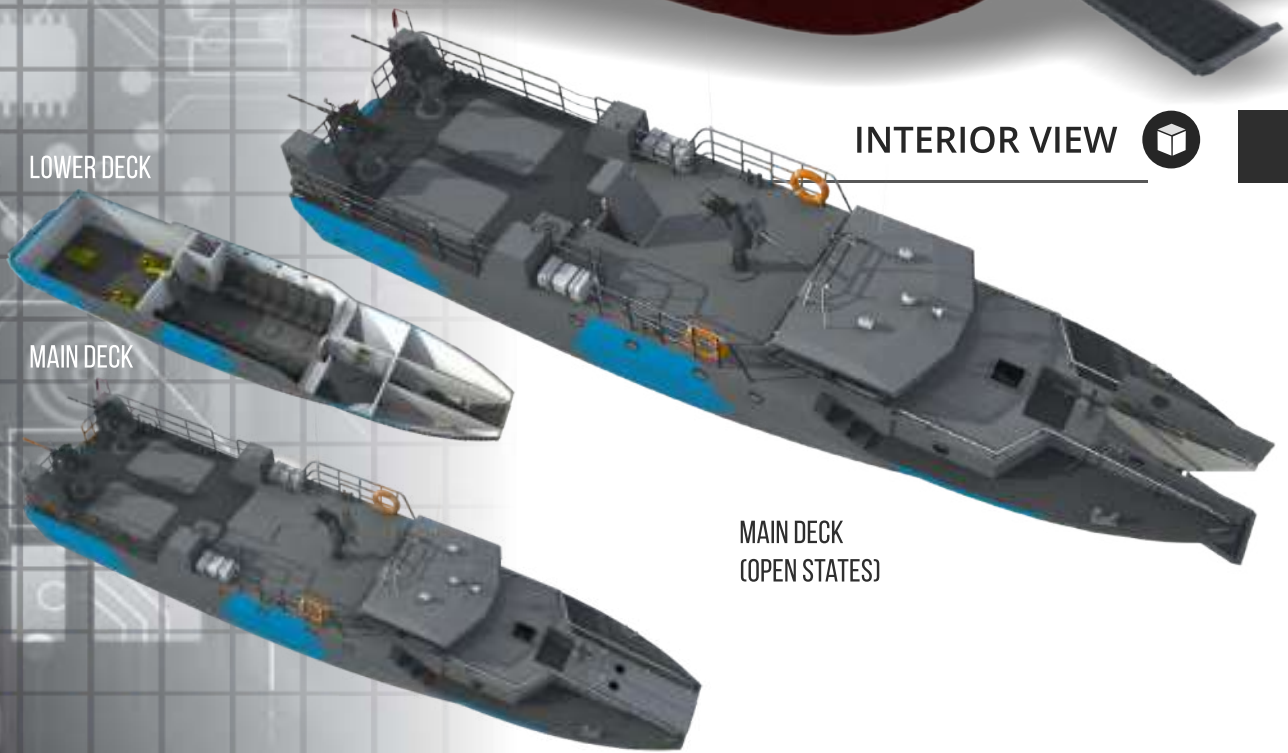
MILITARY COMBATANT



POLICE COMBAT BOAT



NAVY COMBAT BOAT



INTERIOR VIEW



LOWER DECK

MAIN DECK

MAIN DECK
(OPEN STATES)



GENERAL ARRANGEMENT

AWB ELNUSA 8

OWNER : PT. ELNUSA, TBK.
CONSTRUCTION MATERIAL : STEEL
BASIC FUNCTION : ACCOMMODATION WORK BARGE
CLASSIFICATION : BKI CLASS

LENGTH OVERALL : 60,96 M
BREADTH : 18,29 M
DEPTH : 4,00 M
DRAFT : 2,50 M

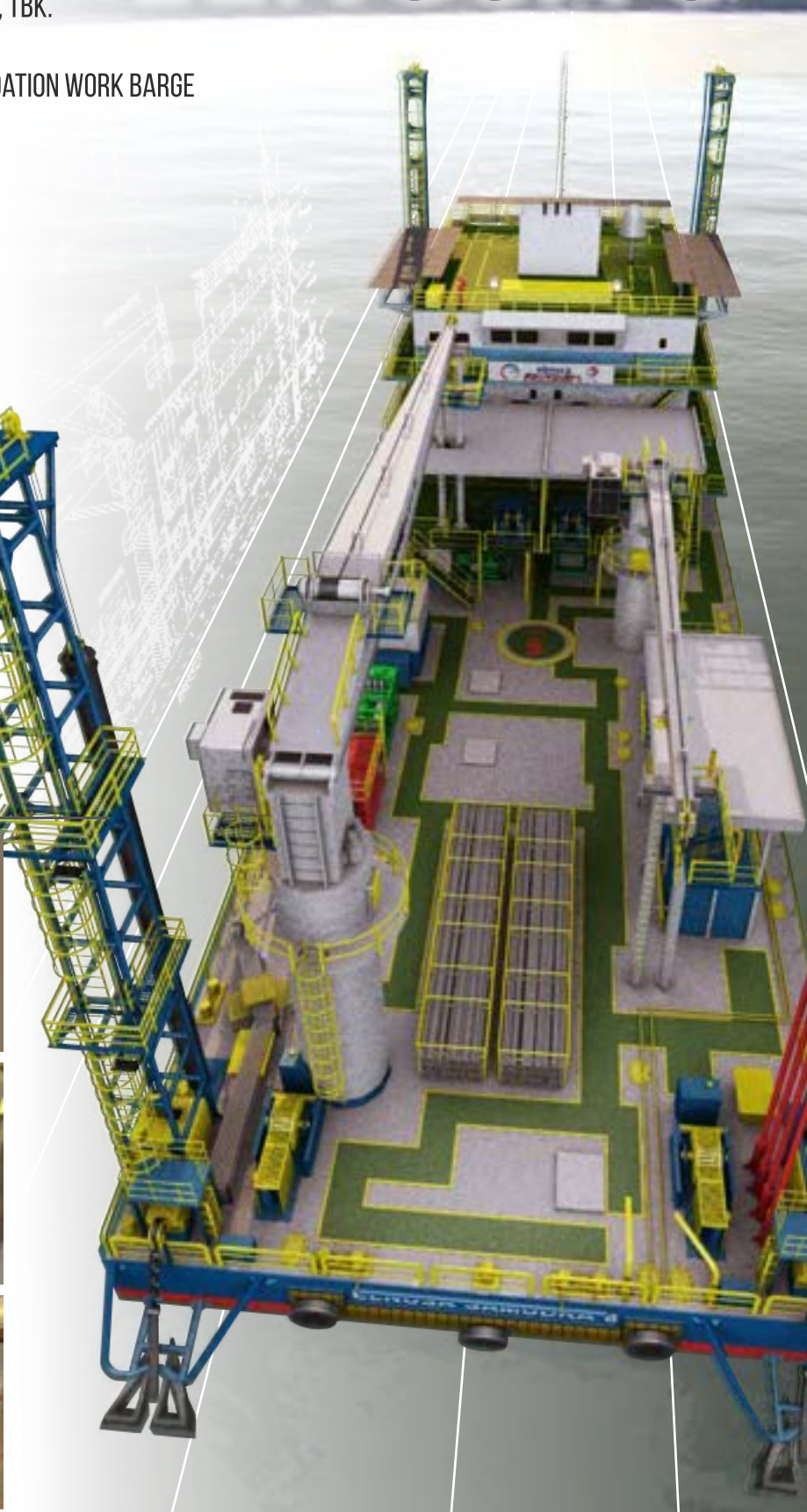
WORKING DECK SPACE
MAIN DECK : 500 M²
SECONDARY DECK : 100 M²

DECK LOADING
MAIN DECK : 10 TON/M²
SECONDARY DECK : 5 TON/M²

COMPLEMENT : 66 PERSONS



3D INTERIOR VIEW



SPECIAL PURPOSE SHIP

TERAFULK MEGANTARA DESIGN



OWNER : P3GL
CONSTRUCTION MATERIAL : STEEL
BASIC FUNCTION : SURVEY & EXPLORATION VESSEL
CLASSIFICATION : IACS

LENGTH OVERALL : 49,80 M
BREADTH : 11,80 M
DEPTH : 5,00 M
DRAFT : 3,50 M

DESIGN SPEED (100% MCR) : 12 KNOTS
COMPLEMENT : 32 PERSONS

3D VIEW



SPECIAL PURPOSE SHIP

OUR PORTFOLIO PROJECT

and some more of Ship Design Project that We manage to deliver



Alumunium/ Patrol Boat

BOAT TYPE	CLIENT	CLASS
Pilot Boat 20 meter	PT. Tri Ratna Diesel	RINA
Crew Boat 21 meter	PT. Eka Multi Bahari	BV
Patrol Boat 28 meter	PT. Tri Ratna Diesel	BKI
Crew Boat 30 meter	PT. Tunas Terafulk Lines	BK
Patrol Boat 32 meter	PT. Citra Shipyard	BKI
Patrol Boat SAR 36 meter	PT. Dumas Tanjung Perak	BKI
Crew Boat 40 meter	PT. Trijaya Global Marindo	RINA
Patrol Boat BC 60 meter	PT. Dumas Tanjung Perak	RINA
OPV 80 meter	PT. Citra Shipyard	RINA



OTHER SHIP

SHIP TYPE	CLIENT	CLASS
Tug Boat & Barge	PT. Servo Buana Resources	BKI
Landing Craft (LCTO)	PT. Sumber Makmur Marina	RINA
Tanker 3.500 LTDW	PT. Dumas Tanjung Perak	NK
Tanker 30.000 LTDW	Prime Royal Shipping Pte.Ltd.	BV
Ro Ro 6200 GT	PT. ASDP Indonesia Ferry	non class
Buoy Tender Vessel 60 m	PT. Citra Shipyard	BKI
Fish Ship 150 GT (Purse Seine & Gillnet)	Kementerian Perindustrian	BKI

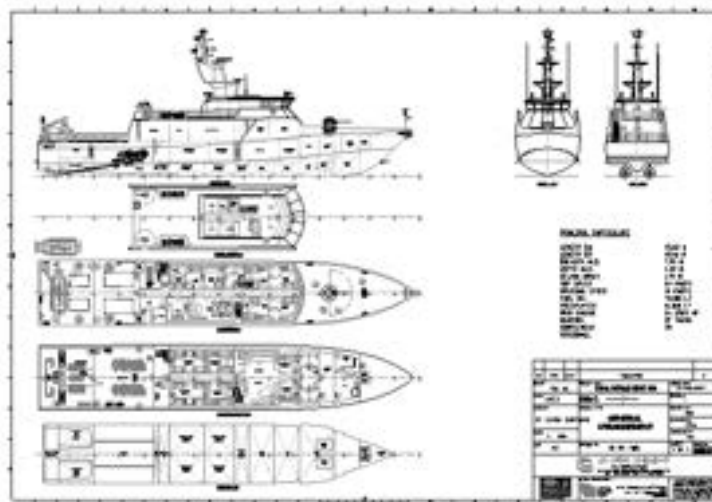
TRAINING/ FEASIBILITY	CLIENT
Basic Ship Design Training	PT. Dok Kodja Bahari
Production Drawing Training	PT. Dok Kodja Bahari
FEM Analysis Training	Ship Classification Malaysia
Feasibility Study for Amoniac Carrier	PT. Asterisk Enam
Ship Price Estimation	PT. BLT (Kalla Group)



PATROL

40 Meter

GENERAL ARRANGEMENT



OWNER	: TNI AL
CONSTRUCTION MATERIAL	: STEEL
BASIC FUNCTION	: FAST PATROL BOAT
CLASSIFICATION	: IACS

LENGTH OVERALL	: 45,60 M
BREADTH	: 7,90 M
DEPTH	: 4,30 M
DRAFT	: 1,70 M

MAX. SPEED (APPROX.)	: 24 KNOTS
ECO. SPEED (APPROX.)	: 18 KNOTS

3D VIEW

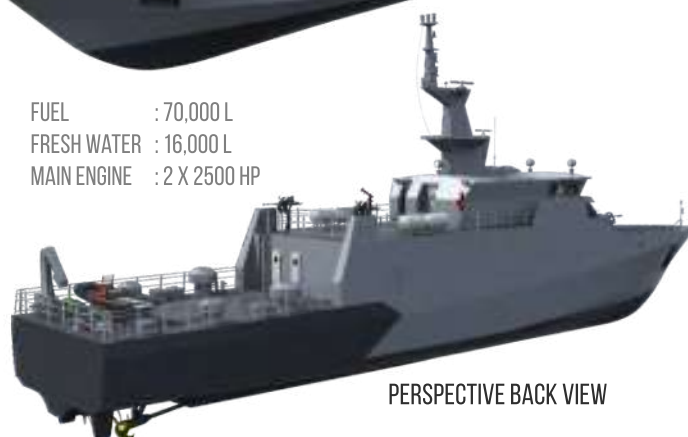


PERSPECTIVE FRONT VIEW

COMPLEMENT : 35
PERSONNEL



FUEL : 70,000 L
FRESH WATER : 16,000 L
MAIN ENGINE : 2 X 2500 HP



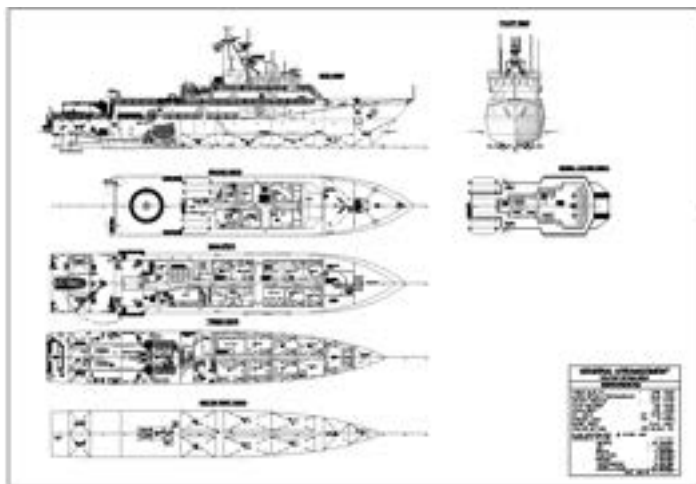
PERSPECTIVE BACK VIEW

TERAFULK MEGANTARA DESIGN

MILITARY COMBATANT



GENERAL ARRANGEMENT



OWNER : BAKAMLA
 CONSTRUCTION MATERIAL : STEEL
 BASIC FUNCTION : FAST PATROL BOAT
 CLASSIFICATION : IACS CLASS

LENGTH OVERALL : 63,00 M
 BREADTH : 10,30 M
 DEPTH : 4,80 M
 DRAFT : 2,80 M

MAX. SPEED (APPROX.) : 22-25 KNOTS
 CRUISING SPEED (APPROX.) : 16 KNOTS



3D VIEW



PERSPECTIVE FRONT VIEW

PERWIRA : 8
 ABK/ KRU : 20
 VIP : 1
 DOKTER : 2

TEAM MEDIS : 4
 PROVOST : 2
 TAMU : 8

PERSPECTIVE BACK VIEW

TARUNA/ SISWA : 10
 TOTAL PERSONIL : 55

TERAFULK MEGANTARA DESIGN

OPV 60 Meter



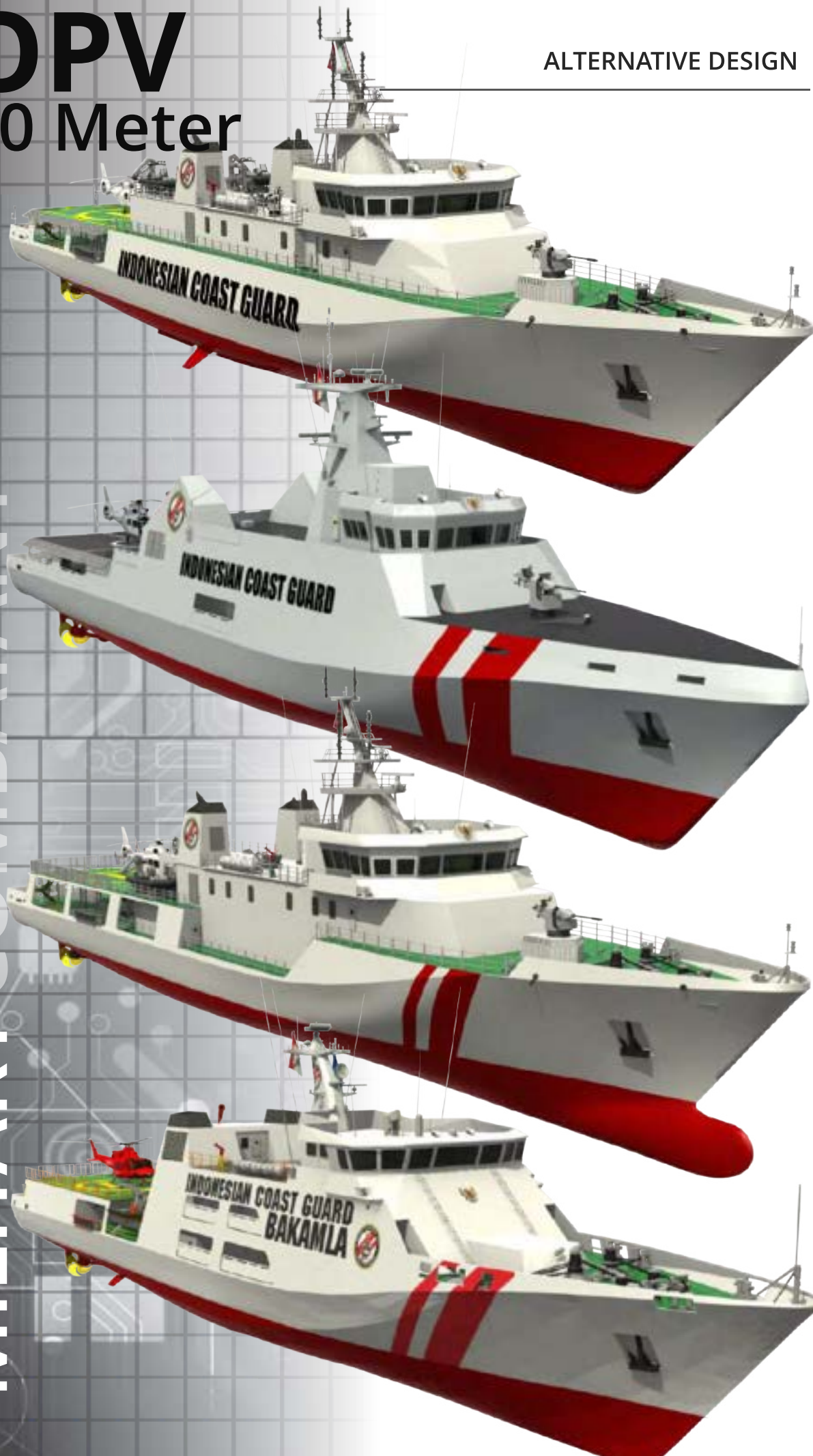
MILITARY COMBATANT

OPV 80 Meter

ALTERNATIVE DESIGN



MILITARY COMBATANT





ALTERNATIVE DESIGN

Drawing for PELINDO 1 and Jasa Armada Indonesia

HARBOUR TUG

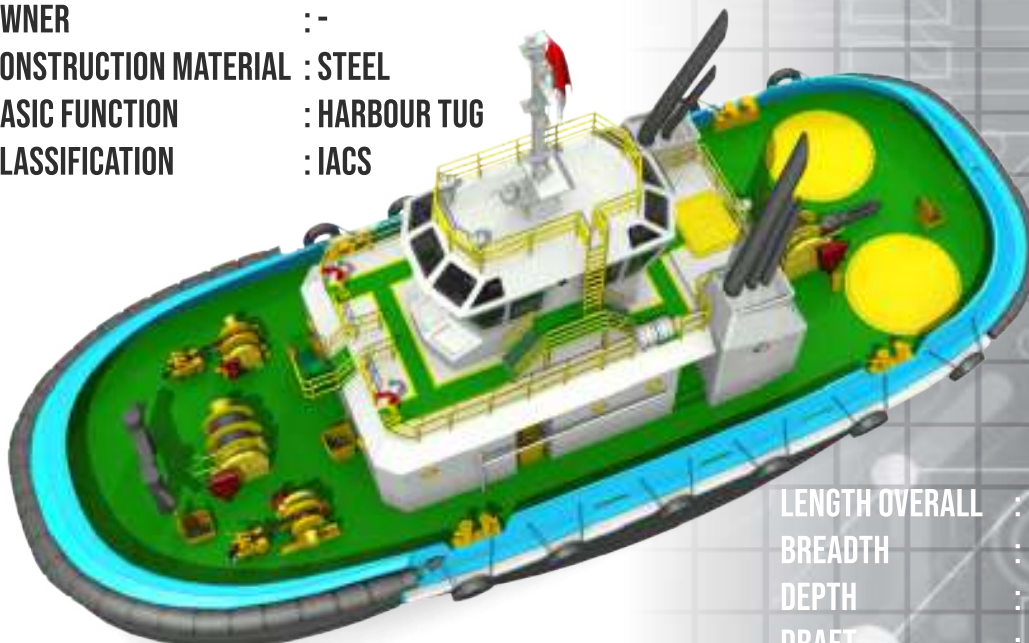
has an all-new hull form with the optimize also in skeg and bilge keel design, giving them unparalleled manoeuvrability & uper towing performance both ahead and astern
With variant of Engine power and bollard pull they will be able to handle the largest ships

CONTINUOUS
IMPROVEMENT



GENERAL ARRANGEMENT

OWNER : -
CONSTRUCTION MATERIAL : STEEL
BASIC FUNCTION : HARBOUR TUG
CLASSIFICATION : IACS



PROPULSION

MAIN ENGINE : 2 X HIGH SPEED, TURBO CHARGED,
AFTER COOLED HEAVY DUTY RATING
MARINE DIESEL ENGINE
TOTAL POWER : 4000 HP
PROPULSOR : 2XAZIMUTH STERN DRIVE

LENGTH OVERALL : 30,00 M
BREADTH : 11,60 M
DEPTH : 5,10 M
DRAFT : 3,80 M

SPEED : 11,00 KNOTS
BOLLARD PULL : 45 TON

TERAFULK MEGANTARA DESIGN

TUG BOAT CLASS

OWNER : -
 CONSTRUCTION MATERIAL : STEEL
 BASIC FUNCTION : FISHING VESSEL
 CLASSIFICATION : BKI

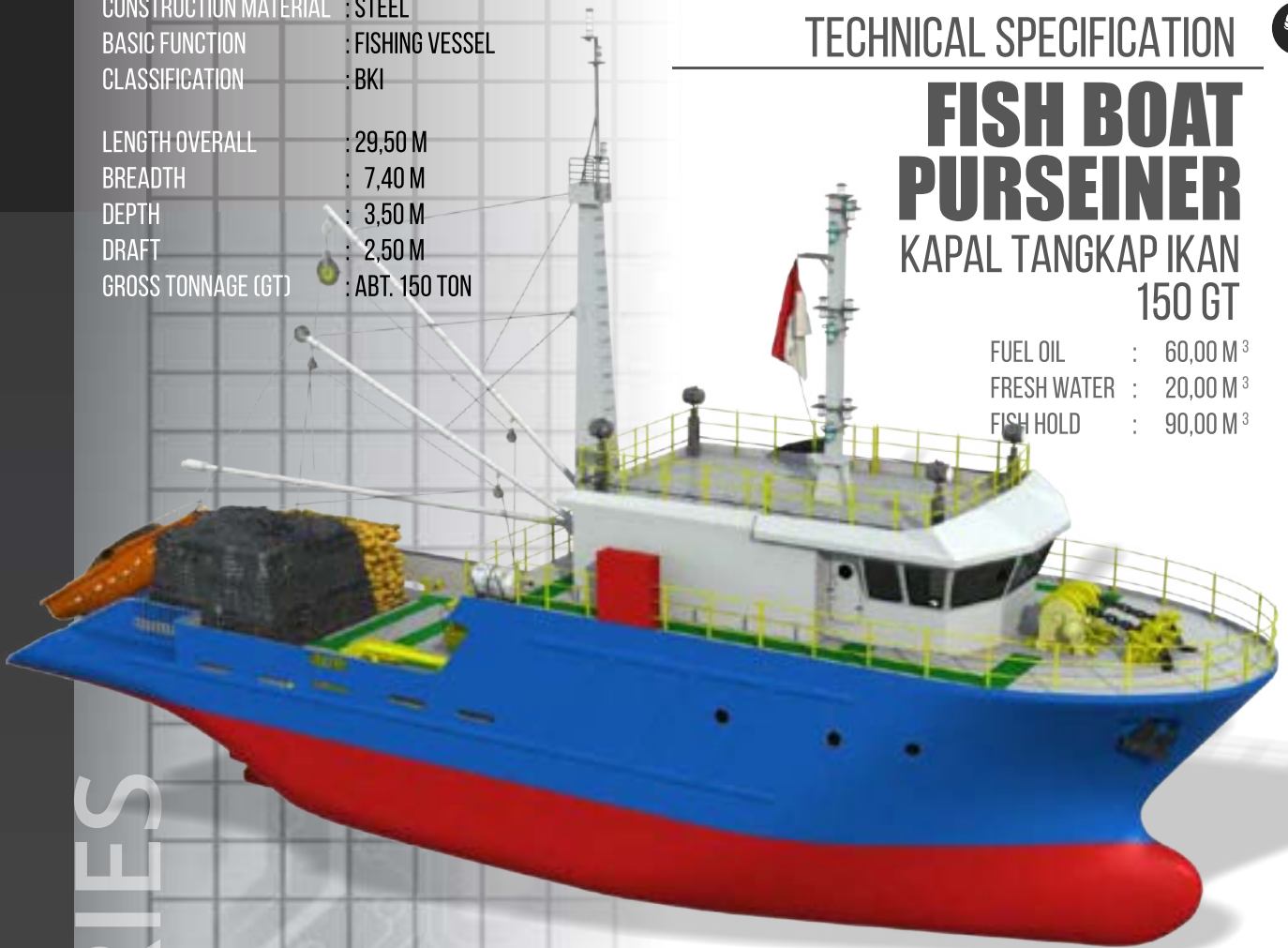
LENGTH OVERALL : 29,50 M
 BREADTH : 7,40 M
 DEPTH : 3,50 M
 DRAFT : 2,50 M
 GROSS TONNAGE (GT) : ABT. 150 TON

TECHNICAL SPECIFICATION

FISH BOAT PURSEINER

KAPAL TANGKAP IKAN
150 GT

FUEL OIL : 60,00 M³
 FRESH WATER : 20,00 M³
 FISH HOLD : 90,00 M³



OWNER : -
 CONSTRUCTION MATERIAL : STEEL
 BASIC FUNCTION : FISHING VESSEL
 CLASSIFICATION : BKI

LENGTH OVERALL : 27,00 M
 BREADTH : 7,40 M
 DEPTH : 3,50 M
 DRAFT : 2,50 M
 GROSS TONNAGE (GT) : ABT. 150 TON

TECHNICAL SPECIFICATION

FISH BOAT GILNET

KAPAL TANGKAP IKAN 150 GT

FUEL OIL : 60,00 M³
 FRESH WATER : 20,00 M³
 FISH HOLD : 90,00 M³

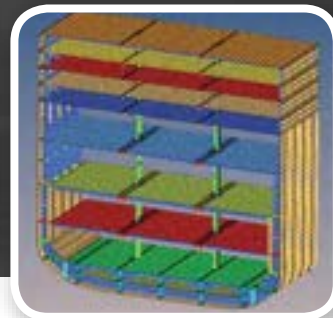


FISH VESSEL SERIES



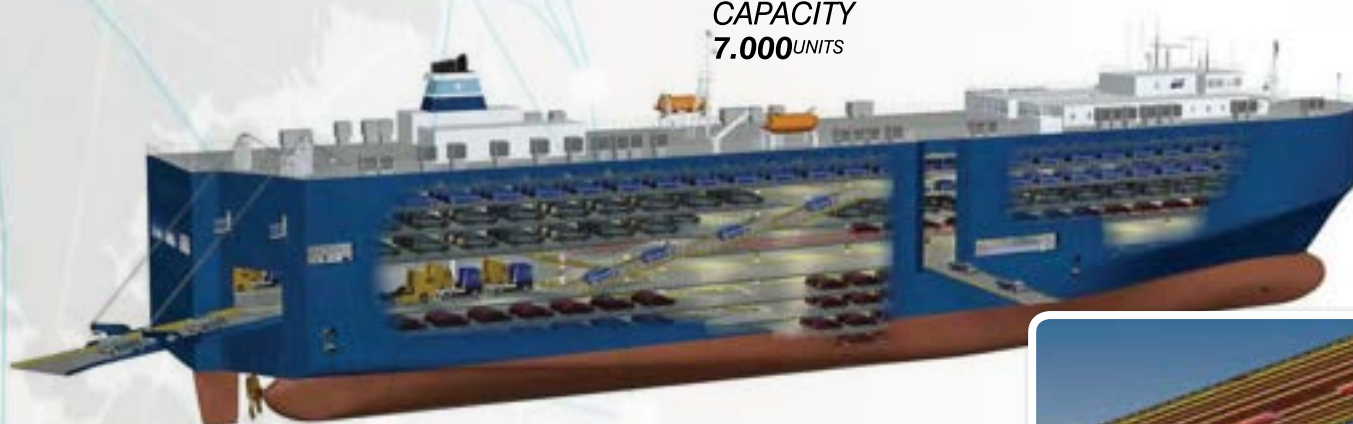
DIMENSION

Length Overall	:	199.90 m
Length Water Line	:	196.00 m
Breadth	:	35.80 m
Depth Mild.	:	15.12 m
Deadweight	:	17.900 ton
Service Speed	:	20 knot



PURE CAR CARRIER

CAPACITY
7.000 UNITS



Overseas Projects

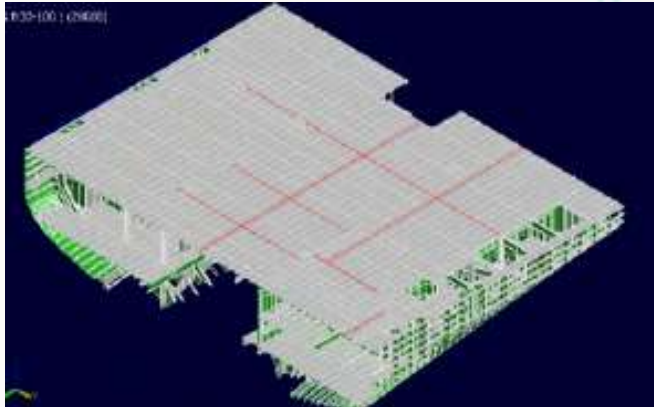
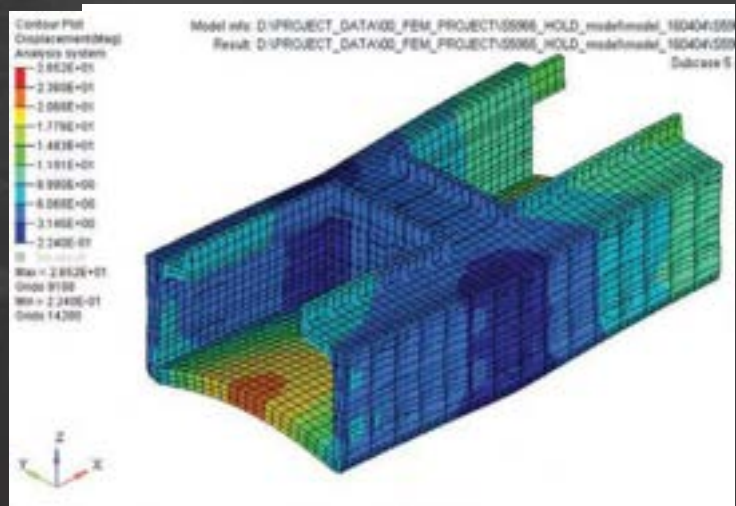


SHIP TYPE	CLASS	SCOPE OF WORK	SOFTWARE
Pure Car Carrier 7000 Units	NK	Whole Ship Strength Analysis	MSC.Software
		Direct Strength Analysis	MSC.Software
		Fixed Deck Analysis	MSC.Software
		Stress Concentration Analysis	MSC.Software
		Torsion Analysis	MSC.Software
		ER Construction 3D Modeling	EV0-SHIP
Bulkcarrier 77.000 DWT PANAMAX	NK-CSR	Direct Strength Analysis	MSC.Software
		Fatigue Analysis	MSC.Software
		ER Construction 3D Modeling	EV0-SHIP
		Accommodation Construction 3D Modeling	EV0-SHIP
Chemical Tanker 46.000 DWT	NK-HCSR	Direct Strength Analysis	MSC.Software
Bulkcarrier 50.000 DWT	NK	Direct Strength Analysis	Altair.Software
		Crane Post Analysis	Altair.Software
		Torsion Analysis	Altair.Software
		Accommodation Natural Vibration Analysis	Altair.Software
Cement Carrier	NK	Whole Ship Model	Altair.Software
		Direct Strength Analysis	Altair.Software
		Cargo Hold Construction 3D Modeling	EV0-SHIP

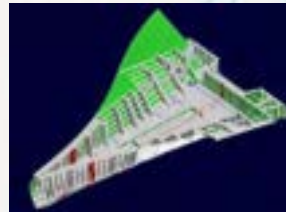
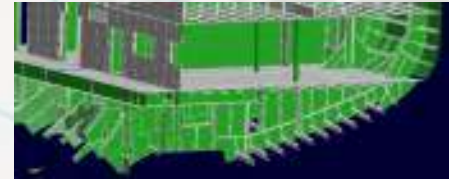
F.E.M. PROJECT

Here are some of FEM Project that We have done so far

Direct Strength Analysis



**BLOCK
ENGINE
ROOM**



**BLOCK DOUBLE BOTTOM
IN ENGINE ROOM**



**STRUCTURE
3D MODEL**

SHIP TYPE	CLASS	SCOPE OF WORK	SOFTWARE
Chemical Tanker 220 m	NK-CSR	Direct Strength Analysis	NK-PrimeShip Hull DSA(MSC.Software)
Bulkcarrier 61.000 DWT	NK-HCSR	Direct Strength Analysis	NK-PrimeShip Hull DSA (Altair.Software)
		Fatigue Analysis	NK-PrimeShip Hull FA (Altair.Software)
		ER Construction 3D Modeling	EV0-SHIP
		Accommodation Natural Vibration Analysis	Altair.Software
Chemical Tanker 189 m	NK-CSR	Direct Strength Analysis	NK-PrimeShip Hull DSA(MSC.Software)
		Fatigue Analysis	NK-PrimeShip Hull FA(MSC.Software)
Bulkcarrier 78.000 DWT	NK-CSR	Direct Strength Analysis	NK-PrimeShip Hull DSA(MSC.Software)
		ER Construction 3D Modeling	MATES (provided by SKDY)
Bulkcarrier 58.000 DWT	NK-CSR NK	Direct Strength Analysis	NK-PrimeShip Hull DSA(MSC.Software)
		Crane Post Analysis	MSC.Software
		Torsion Analysis	MSC.Software
		Accommodation Natural Vibration Analysis	Altair.Software
		ER Construction 3D Modeling	MATES (provided by SKDY)
Bulkcarrier 90.000 DWT	NK-CSR	Direct Strength Analysis	NK-PrimeShip Hull DSA(MSC.Software)
Chemical Tanker 35.000 DWT	NK-HCSR	Direct Strength Analysis	NK-PrimeShip Hull DSA (Altair.Software)
		ER Construction 3D Modeling	EV0-SHIP
		Accommodation Construction 3D Modeling	EV0-SHIP
		Cargo Hold Construction 3D Modeling	EV0-SHIP
Bulkcarrier 52.000 DWT	NK-CSR	Direct Strength Analysis	NK-PrimeShip Hull DSA(MSC.Software)
		Fatigue Analysis	NK-PrimeShip Hull FA(MSC.Software)

VIRTUAL MODEL TEST

Advanced engineering analysis can be described as the representation of a physical structure with a numerical mesh divided into elements of finite number and solution of differential equations belonging to a specific physical problem on this numerical mesh by using appropriate boundary conditions.

In a sense this is physical simulation or virtual reality.

COMPUTATIONAL FLUID DYNAMICS (CFD) ANALYSIS

Hull Construction FEM Analysis



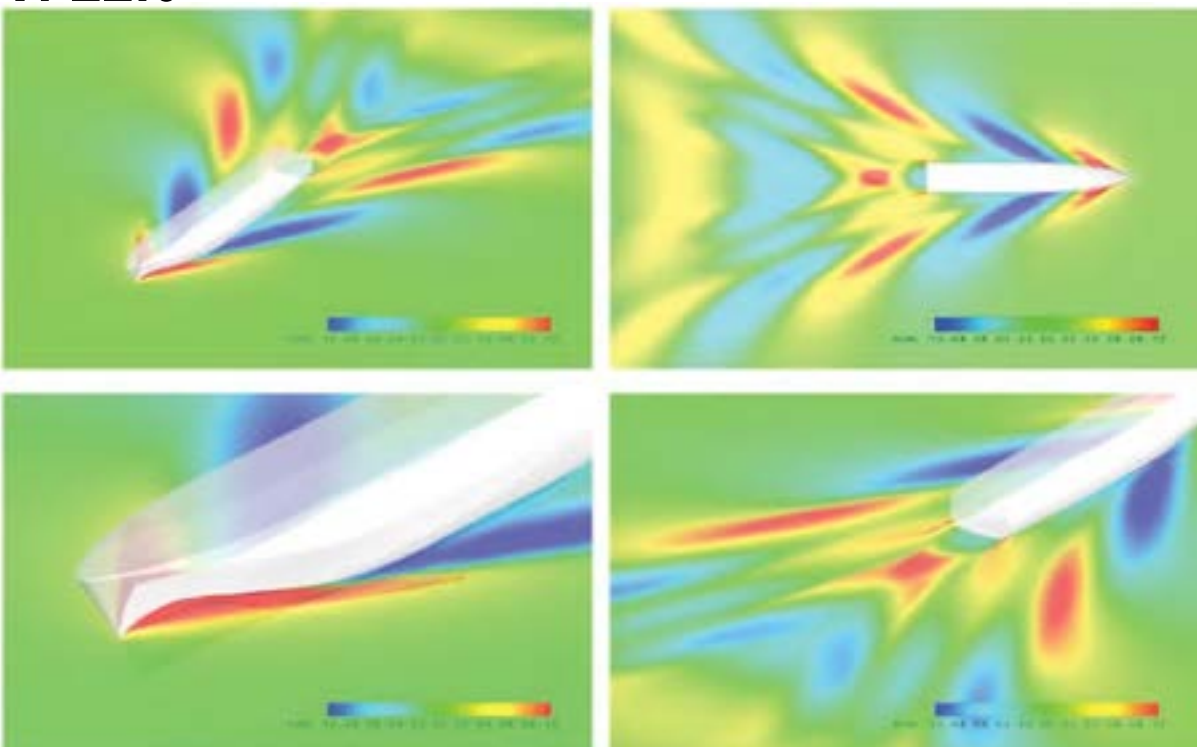
With our experience in ship design, it is included on performance CFD analysis on numerous project for our clients.

NUMECA FINE™/MARINE is a unique integrated CFD software environment for the simulation

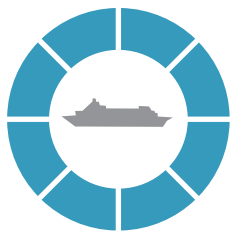
of mono-fluid and multy fluid flows around any kind of ships, boats, or yachts including various types of appendages

V: 22.0 knots

WAVE FIELD | FREE SURFACE | ELEVATION



POWERED BY



NAPA is the world leading software house supplying solutions for ship design and operation with a mission to improve safety and eco-efficiency of the global maritime industry.
(FINLAND)



CADMATIC is a leading developer of digital and intelligent 3D-based design, engineering and information management software solutions for the marine and plant industries.
(FINLAND - NETHERLAND)



ActCAD is a 2D Drafting and 3D Modeling CAD software meant for Engineers, Architects and other technical consultants.

ActCAD is a native DWG & DXF CAD software to create and edit drawings. ActCAD is based on the technologies from IntelliCAD Technology Consortium (ITC), ODA Teigha Libraries, ACIS 3D Kernel, Wintopo, ps2edit etc



Recognized today as the most innovative company in the field of Computational Fluid Dynamics (CFD) and multiphysics design, analysis and optimization. Driven by creativity, innovation & quality, we proudly turn our passion into software toolsets that support the world's leading industries.



EVO - SHIP
3D Ship Design
Software
(Japan)

EVO-SHIP

Patran is the world's most widely used pre/post-processing software for Finite Element Analysis (FEA), providing solid modeling, meshing, analysis setup and post-processing for multiple solvers including MSC Nastran, Marc, Abaqus, LS-DYNA, ANSYS, and Pam-Crash
(USA)



MSC Nastran is a multidisciplinary structural analysis application used by engineers to perform static, dynamic, and thermal analysis across the linear and nonlinear domains, complemented with automated structural optimization
(USA)



Altair HyperWorks tools for multidisciplinary simulation & development will become increasingly important in helping product designers create outstanding user experiences
(USA)

NAPA & CADMATIC



Creating optimized designs rapidly and iteratively throughout the ship's design process is essential for today's ship designers. NAPA Design software tools meet the true needs of high quality ship design and ship building.

RESELLER

NAPA Group's development work is carried out in close cooperation and coevolution with the customers. Strategic alliances are forged in order to diversify both development and marketing.



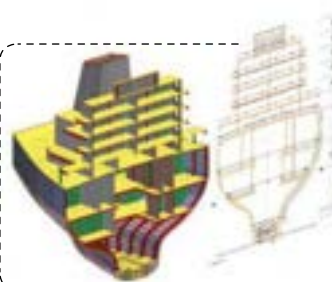
NAPA hull Form & performance:

Advanced flexibility for hull form design and performance optimization.



NAPA Statutory Compliance:

Industry-leading, powerful and efficient stability and longitudinal strength analysis.



NAPA Steel:

Efficient structural design in early design stages And others modul such as NAPA Offshore, NAPA Loading Computer, and NAPA Emergency Respons.



CADMATIC Software Solutions



Cadmatic and Numeriek Centrum have combined business operations. CADMATIC provides a complete solution for the entire ship and offshore building process., from initial design, preliminary design, basic design, and detailed design, upto production information and support during production and maintenance.

Cadmatic allows you to significantly save time during the production and engineering phases. It also reduces material cost during the production phase. The software is easy to learn and fastest to implement.

TERAFULK TEAM



**CURRENTLY WE HAVE 62 ENGINEERS AND DRAFTERS
ALSO 9 SUPPORTING TEAM**



3D visualizer

COMMUNICATE | DESIGN | VISUAL | IDEA

to make your idea of design visible to other, how they look, how they operate, so you can interact with your client about your product or service

company profile | product profile | logo animation | character animation | event documentat

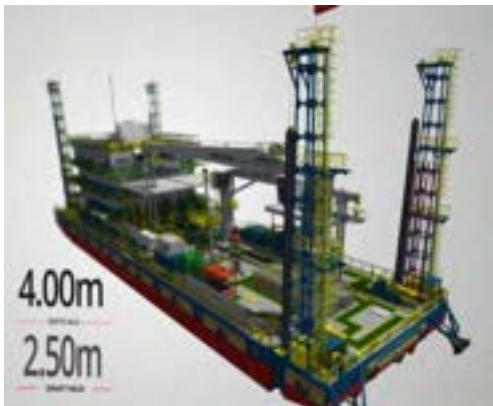
PRODUCT PRESENTATION

AONSDP merak-bakaheuni, terafulk
Megantara Design, Tunas Terafulk
Lines, SKDY japan, ELNUSA, and more



OTHER PRESENTATION

Safety Induction for PHE WMO for
onshore and offshore installations.
Event documentation on PHE
WMO tanker ABERKHA as one
of their offshore installation and
other Ship Design Presentation.



ClassNK



CORPORATE PROFILE | 2022

Basic Design
Hull Construction
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Proj. Management & Supervision
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Engineering Retrofit Inst. Of Ship Comp.



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