“Can you build a ship properly in China? Yes, here is how!”

Speaker: Captain Mike Meade AFNI

(Founder and CEO, M3 Marine Group)

ICS
Institute of Chartered Shipbrokers

M3 MARINE

Content

- Introduction
- China
- Our Vessel & Why
- Key design features of our Vessel
- Marine Engineering of ‘Southern Star’ Design
- Ceremonies & Videos of the Southern Star

M3 Marine Group - Company Overview

Established in 2005, pride ourselves as one of Asia's largest independent offshore ship broking and marine consultancy groups possessing the necessary qualities and capabilities to meet the growing local and international demand for specialised offshore marine services.

2005
- M3 Marine was established

2008
- M3 Marine (Offshore Brokers) was incorporated

2010
- M3 Marine Expertise was incorporated

2011
- Achieved Singapore SME 1000 status

2012
- Achieved Singapore SME 1000 status
- ISO 9001:2008
- OCIMF OVID

2014
- Singapore Maritime Distinguished Awards 2014
- Achieved Singapore SME 1000 status

"As a Group, we focus on employing top quality professionals with high levels of operational experience and together with a clear understanding of the standards required by end users, we have built a solid reputation known for providing prompt, quality and 'added value' service which has led to our success so far."

Mike Meade, Founder & CEO of M3 Marine Group

Professionals who add Technical & Commercial Competence to your Offshore Marine vessel needs

M3 Marine Group - Company Overview

M3 Marine provides offshore ship broking and a comprehensive range of technical and commercial consultancy services tailored to meet the needs of the Offshore Marine, Oil & Gas Industry. With extensive, real and valuable, multi-faceted, industry experience and 'up to the minute' expert offshore knowledge, we "add value" where it matters.

We have a team of dedicated brokers who each hold 'real' industry background and a team of experienced technical / marine consultants and marine engineers, experts in their respective fields.

We are further underpinned by a network of associates and contacts and a non-exclusive pool of mariners, chief engineers, offshore engineers and industry professionals.

M3 Marine Group

M3 Marine Expertise	M3 Marine Offshore Brokers	M3 Marine Valuations
Provides technical & commercial / corporate consultancy services	Provides offshore ship broking services (time & bareboat charters, sales & purchase, new building)	Provides vessels & equipment valuation services in the Offshore Marine, O&G sector.

Professionals who add Technical & Commercial Competence to your Offshore Marine vessel needs

M3 Marine Offshore Brokers

M3 Marine Offshore Brokers (M3OB) possess the **commercial and technical knowledge and attributes** to offer our valued Clients a spread of brokerage services for Newbuilding, Sales & Purchase and Chartering.

Our brokers are constantly interfacing with the market and gathering invaluable 'market intelligence' in this process. Our data are live, updated daily to bring across first hand information to our clients and potential clients.

CHARTERING (TIME & BAREBOAT)	NEWBUILDING	SALE & PURCHASE
❖ **M3OB** is well-versed in all manner of time, bareboat & towage contracts ❖ Types of vessels M3OB brokers: • AHT / AHTS / PSV • DSV / ROVSV • Barges • Crew Boats / Fast Supply Boats • Tugs (Harbour & Ocean going) • Compact Semi Submersible • Construction Support Vessels • Landing craft (LCT) • Safety Standby Vessels • Heavy Lift Vessels • Jackup Barges / Liftboats • Survey / Utility Vessels • Workboats / Workbarges	❖ **M3OB** is actively involved in the entire **newbuilding process** – from the conceptualization of the vessel through to its delivery ❖ This process includes: • vessel design • vessel specification • pre-qualification of shipyard • bidding • shipyard selection • contract negotiation • commercial closing • vessel delivery	❖ **M3OB** forges strong business relations with offshore vessel owners, financial institutions & numerous shipyards, thus we are always in the 'loop' of keen buyers & sellers ❖ We are well-versed with the **market conditions** and **dynamics** of the S&P sector to match the right vessel to suit the job for the buyer without compromising the quality of the vessel being brokered

We 'LIVE' the Business!

M3 Marine Expertise

M3 Marine Expertise (M3ME) possesses the **marine technical capabilities and competencies** to offer our valued Clients a spread of high quality technical Offshore Marine Oil and Gas related services.

Technical / Marine Consultancy		
DP Vessel Services		**DP Trials**
• DP Design Review / Preliminary Analysis • DP Vessel Technical Concept Development • DP GAP Analysis / DP Upgrade Consultancy Services	• DP Operations Manuals • Development of CAMO, ASOG, WSOG • DP Incident Investigation • DP Project Management & Sea Trials Management • Development of SEEMP	• Annual DP Trials • DP FMEA Verification Trials • DP Vessel Assurance Trials / Audits
FMEA / FMECA	**Newbuilding / Maintenance / Conversion**	
• DP Vessels (Class 1,2,3) • Saturated Diving Systems • Air Diving Systems • Offshore Cranes • Bilge/Ballast Systems (Heavy Lift)	• Specifications • Supervision • Contract / Specification Review Advice • Dry-dockings / Special Survey • Diving System Integration Consultancy	
Audits / Surveys / Inspections		
• OVID (OCIMF) • CMID (IMCA) • Diving Systems (IMCA D023 / D024 / Advice on Class Requirements) • ROV (IMCA)	• Condition Survey • Pre-Purchase Inspection / Survey • On-Off Hire Inspection / Survey • Suitability Survey • Towage Approval Inspection & Certification	

M3 Marine Expertise

M3 Marine Expertise (M3ME) pride ourselves on **adding value** in all services provided to our clients and maintain **quality driven and consistently well managed** deliverables throughout the life of a transaction, project or requirement.

Our strengths and diversity of services vest in other areas as follows:

Commercial Consultancy	Expert Witness / Placement
Market Study	**Expert Witness**
• Market Study / Research for Offshore Oil & Gas and OSV Markets	• Legal & Insurance Claims Support
Commercial & Corporate Consultancy	**Expert Placement**
• Merger & Acquisition, Corporate / Commercial Due Diligence	• Placement of Specialist Marine Personnel i.e. Masters, DPOs, Chief Engineers etc.

Marine Capability (Europe)	
Marine Warranty services and related expertise	
M3ME offers the following services through our European arm led by Capt. John Carroll:	
• Shipping/Cargo Risk Management • Logistics Risk Management • Marine Risk Management	• Marine Warranty Surveys • Salvage & Wreck

M3 Marine Valuations

M3 Marine Valuations (M3MV) is one of the few (if not the only) consultants that have a valuation 'procedure' when valuing vessels.

Partners with Vessel Value on Offshore Valuations

VesselsValue.com

M3MV undertakes and delivers quality and reliable **asset valuations** (vessels / rigs / equipment), including without limitation, overviews on key considerations in assessment of value, detailed reviews of technical specifications of offshore marine assets, detailed reviews of newbuild contract documentation, construction and associated costs for valuation purposes, indicative current valuation ranges and historic, current and future charter rate expectation for assets to owners, keen buyers and sellers, financial institutions, banks and other interested parties.

We also participate in joint-valuations on larger projects, have advised on numerous M&A deals and have co-operated with several esteemed yet typically non-offshore ship broking companies by undertaking on their behalf vessel valuations for offshore assets.

Vessels valued range from the most complex DP MPSVs, Jack up / Derrick Lay / Pipe Lay / Accommodation Work Barges (and their sophisticated equipment onboard) to smaller sized Anchor Handlers, tugs and barges.

CHINA

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History of Shipbuilding in China

- Historic quality issues aside, China has become a mature place to build all manner of ships; from Bulk Carriers to Container ships to Tankers to OSV+

- China is now also the 'go to' place for the Offshore market and has quickly risen to be the world leader in OSV deliveries….and to the detriment of Singapore (Batam)…increasingly Rigs also.

- From the early 2000s, there were very few OSVs built in China. Most of these vessels were built in the USA, Norway, Singapore and Batam.

- My personal view is that the huge growth of OSV building in China in the early 2000's was given a huge boost by Jaya, a Singapore shipbuilder.

- Post Global Financial Crisis [GFC] in 2008, production (wholesale) of OSVs moved ex-SEA to China.

History of Shipbuilding in China

- There are now too many shipyards in China.
- Last estimate some 1600+ yards that could build ships, OSV's and Rigs.
- The Chinese Government is avowed to reduce the number of Shipyard Groups to less than 100.
- Evidence of this ? The demise of Sinopacific, Rongsheng and many more.
- The most recent merger of COSCO and China Shipping will see the combined entity reduce from 37 shipyards to 17.
- The above is evidence that the 'white list' is working…. What is the whitelist ?

Background of the Whitelist

- The Chinese shipbuilding industry grew extensively up to 2010. Investments were made both in facility upgrades of existing yards as well as in the building of multiple new yards.
- In blue sea shipping, when the industry took a steep downturn in 2011, new orders diminished. Overcapacity issues arose and left many yards on the brink of bankruptcy.
- 2012 saw further declines and the situation became acute
- Authorities in Beijing put in place policies that could tackle the capacity problem.
- In 2013 the ***whitelist*** was announced and it took another year for the list to be published.

The Solution from the Whitelist

- The ***whitelist*** aims to single out yards that are worthy of policy support. The support would be in the form of easier access to **capital** and **orders**. The whitelist currently covers 60 yard groups

- The selection process ensures that the chosen yards get the support they deserve, and vice versa

- The selection is divided into two:

  1. An initial screening performed by local government

  2. A final screening performed by China Association of National Shipbuilding Industry (CANSI) and China Classification Society (CCS)

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The Selection Criteria for the Whitelist

- Within China the screening has raised concerns regarding the trustworthiness of the information provided.
- There has been very little transparency surrounding the screening process and the criteria applied, the financial health of certain selected yards has proven that the most emphasis has been on yard facilities and little or no emphasis on financial strength.
- By favoring yards with more sophisticated production facilities supports more intensive production (a move to more complex vessels). Traditionally, Chinese yards have been the most competitive when it comes to labor-intensive production. Flight to quality ?
- The above has sparked concerns on the long term impact of the white list policy on the industry.

The Effects of the Whitelist

- It has put pressure on Chinese Banks to moderate their lending (Sinosure , Exim , BOC etc).
- However, several non-whitelist yards seems to be embraced by both the banks and their clients, while certain whitelist yards are experiencing the opposite.

Output—Whitelist/non-whitelist

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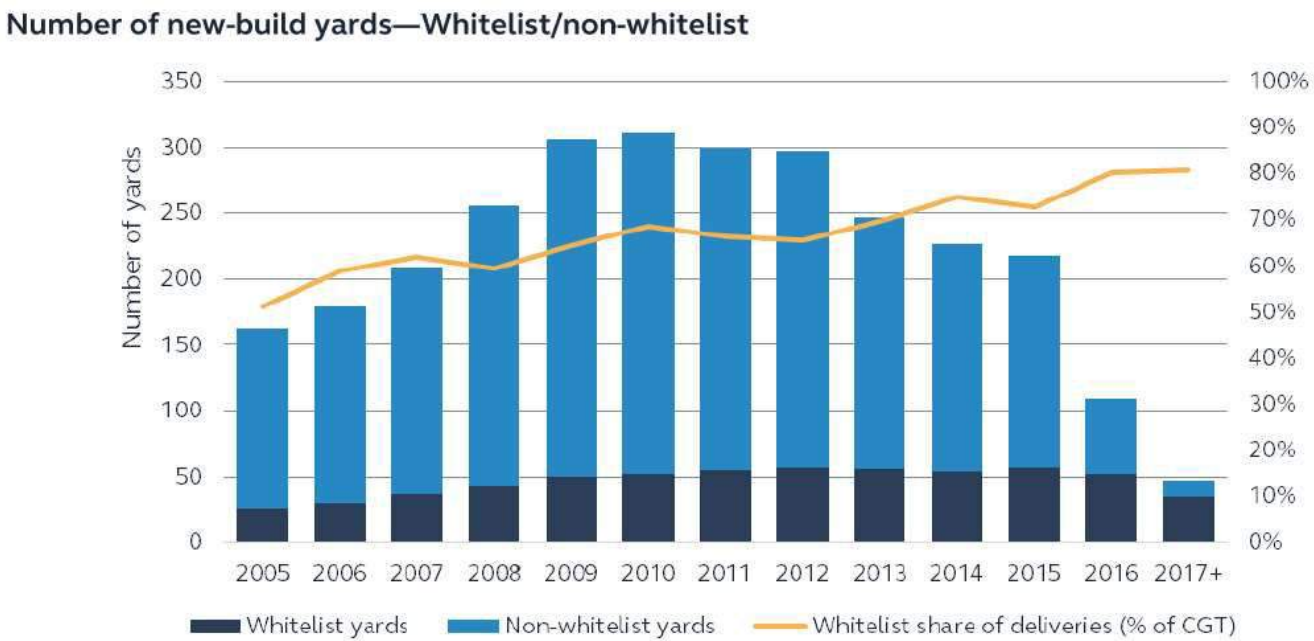
Number of Active Yards



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Where are the Whitelist Shipyards in China?

Hebei Province
48 Shanhaiguan Shipbuilding HI

Tianjin Province
51 Tianjin Xingang Shipbuilding HI

Jiangsu Province
02 New Yangzijiang Shipbuilding
03 New Times Shipbuilding
04 Rongsheng Heavy Industries
05 Yangzhou Dayang Shipbuilding
06 Taizhou Kouan Shipbuilding
07 Jiangsu Hantong Shipbuilding HI
08 Zhenjiang Shipyard
09 Nantong Mingde Heavy Industry
10 Nantong Pacific Marine Engineering
11 Sainty Shipbuilding
12 Taizhou Sanfu Shipbuilding and Eng.
13 Jiangsu Hongqiang Heavy Industry
14 AVIC Dingheng Shipbuilding
43 Chengxi Shipyard
52 Nantong COSCO KHI Ship Engineering
57 China Shipping Industry (Jiangsu)
58 Jinling Shipyard
60 Jiangsu New East Marine Equipment

Hubei Province
59 Qingshan Shipyard

Chongqing Province
50 Chongqing Chuandong Shipbuilding HI

Jiangxi Province
25 Jiangzhou Union Shipbuilding
26 Tongfang Jiangxin Shipbuilding

Guangxi Province
41 Guijiang Shipbuilding
44 Xijiang Shipbuilding

Liaoning Province
01 Dalian Liaonan Shipyard
45 Bohai Shipbuilding Heavy Industry
46 Dalian Shipbuilding Industry Corp
53 Dalian COSCO KHI Ship Engineering
55 COSCO Dalian Shipyard

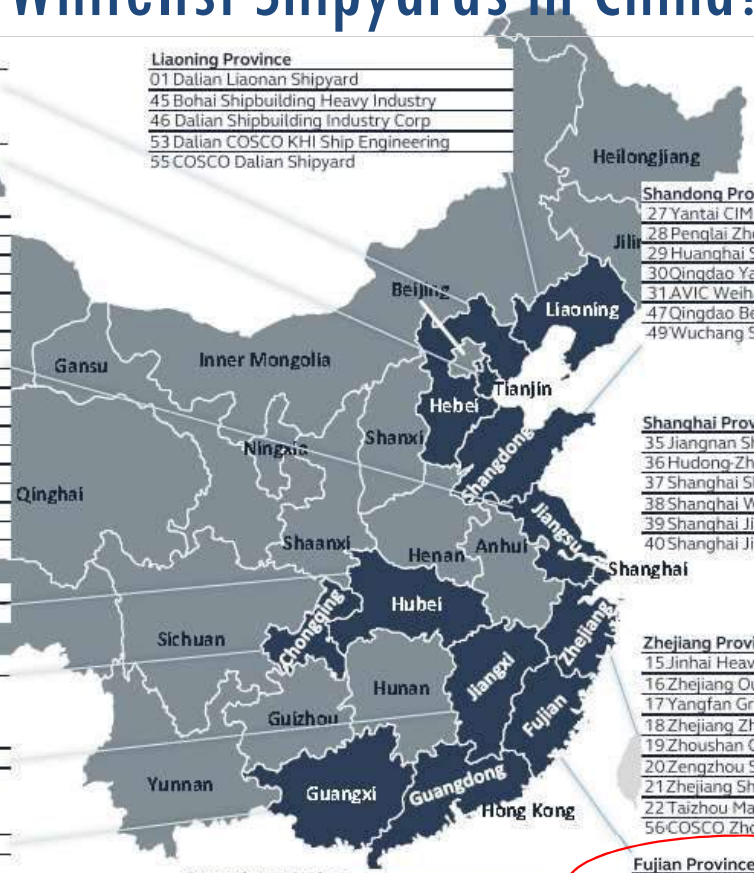
Shandong Province
27 Yantai CIMC Raffles Offshore Ltd
28 Penglai Zhongbai Jinglu Shipbuilding
29 Huanghai Shipbuilding
30 Qingdao Yangfan Shipbuilding
31 AVIC Weihai Shipyard
47 Qingdao Beihai Shipbuilding HI
49 Wuchang Shipbuilding Industry

Shanghai Province
35 Jiangnan Shipyard Group
36 Hudong-Zhonghua Shipbuilding
37 Shanghai Shipyard
38 Shanghai Waigaoqiao Shipbuilding
39 Shanghai Jiangnan Changxing Shipbuilding
40 Shanghai Jiangnan Changxing HI

Zhejiang Province
15 Jinhai Heavy Industry
16 Zhejiang Ouhua Shipbuilding
17 Yangfan Group
18 Zhejiang Zhenghe Shipbuilding
19 Zhoushan Changhong International Shipb.
20 Zengzhou Shipbuilding
21 Zhejiang Shipbuilding
22 Taizhou Maple Leaf Shipbuilding
56 COSCO Zhoushan Shipyard

Fujian Province
23 Fujian Mawei Shipbuilding
24 Xiamen Shipbuilding Industry

Guangdong Province
32 Guangdong Yuexin Ocean Engineering
33 Guangzhou Huangpu Shipbuilding
34 Guangzhou Shipyard International
42 Guangzhou Wenchong Shipyard
54 COSCO Guangdong Shipyard



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Our Vessel & Why……..

Development…….

Why China ?

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Quality in China

- In the early days, the quality of ships built in China was awful. Poor quality, late delivery, inefficient build process, questionable compliance to contracts, poor quality equipment & components.

- People, its changed !

- The change and flight to quality has been rapid…..in some yards…key is discipline and diligence, then….

- …….today you can built ***ANYTHING*** in china.

- How?

Why did we go to China for our project ?

- In 2012, when pricing our project, the Offshore market was still booming. It was not until the oil price 'crash' in Q3 2014 that this boom, led to overbuilding which is now leading to a 'bust'.

- Nonetheless, capacity and pricing for newbuilds in Singapore / Batam at the time was non-competitive (price **AND** quality), the Singapore yards having moved to larger more complex projects and the commodity yards in Batam had lost out to China post GFC.

- *"We will never build our ship in China"* – famous last words !

- So why did we ?

Why did we go to China for our project ?

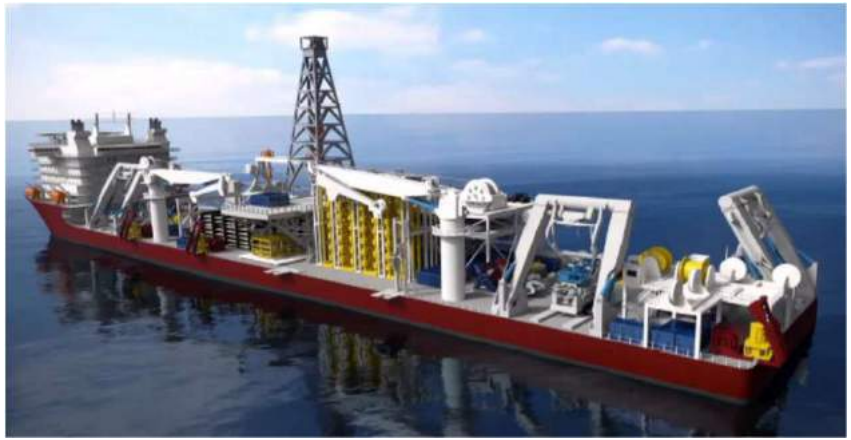
- Fujian Mawei Shipbuilding is the earliest-established Chinese shipbuilding facility started in 1866.
- In its pioneering days Fujian Mawei Shipbuilding contributed to the progress of China's fledging manufacturing industry from civil aircraft manufacturing to the shipbuilding of various navy ships.

Fujian Mawei is a part of the Fujian Shipbuilding Group

福建船贸
FUJIAN SHIPBUILDING

Fujian Mawei Shipbuilding

- Chinese Govt Sept 2014 “White List” of 60 Best Shipyards in China
- Now, primarily build offshore projects – 15+ Offshore DP Vessels per annum



Built a range of DP3 Accommodation and Topside maintenance Compact Semi Submersible vessels (9 in total)

- First successfully delivered to Petrobras (2014)
- Second successfully delivered to Brunei Shell (2014)

Awarded Nautilus Minerals contract (2015) for worlds first Subsea Mining Vessel – complex DP2 227m x 40m, 45,000 dwt

Nautilus Mining Vessel at Fujian Mawei – Q4 2016

MARINE

Our Ship Building Philosophy – In China

Deliver a good quality ship at a price that the charterer can make money

- Determine, decide and stipulate what standards and specification are and are not required
- Have a well thought through design agreed with end users (clients)
- Develop a detailed and "tight" specification package (Spec, GA, Makers list)
- Freeze the design before awarding ship build contract
- Make no changes to the design after build has started
- Have true equity in the project, and enough of it
- Have a rigid Commercial contract. Refund Guarantees are good but in China not all they are cracked up to be.
- Supervise the build closely with adequate resources to ensure design quality, budget and schedule are met
- Incentivize the build superintendent and his team to deliver on budget
- Set expectations with the shipyard that there will be no Variation Orders
- Develop a real, true and lasting relationship with the yard

Drivers of our Project in China

John Hallin Giddens

- Operational Concept Developer of Tasik Toba
- Founder and shareholder in Tasik Subsea

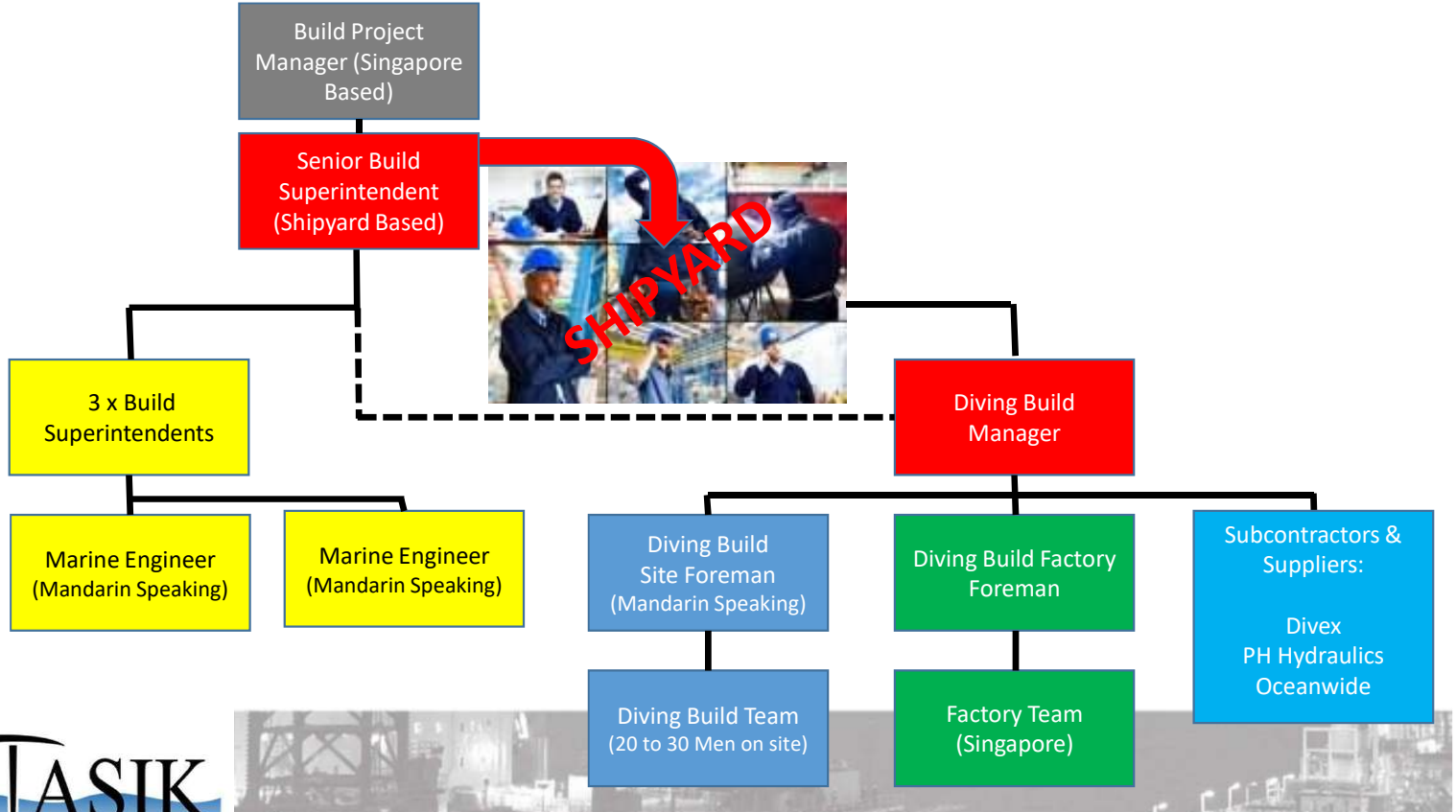
- Founder and former CEO of Hallin Marine
- Negotiated sale of Hallin Marine to Superior Energy
- Former UK Navy Clearance Diving Officer, ran experimental SAT diving in UK and Norway in the 1980's

Mike Meade

- Founder and majority shareholder of M3 Marine Group
- Operates a ship brokerage and marine consultancy business

- Former VP of Seacor Marine , 15 years in Swire Pacific (Middle East, US and Singapore with Global sales functions)
- Master Mariner with operational DP specialty
- Founder and shareholder in Tasik Subsea
- Detailed design consultants on Tasik Toba

Build Supervision – key !!



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TASIK subsea

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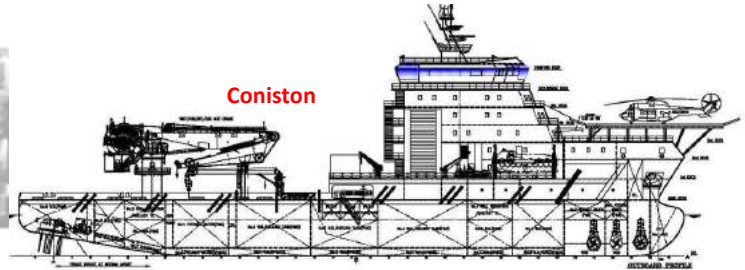
Earlier Vessel Development

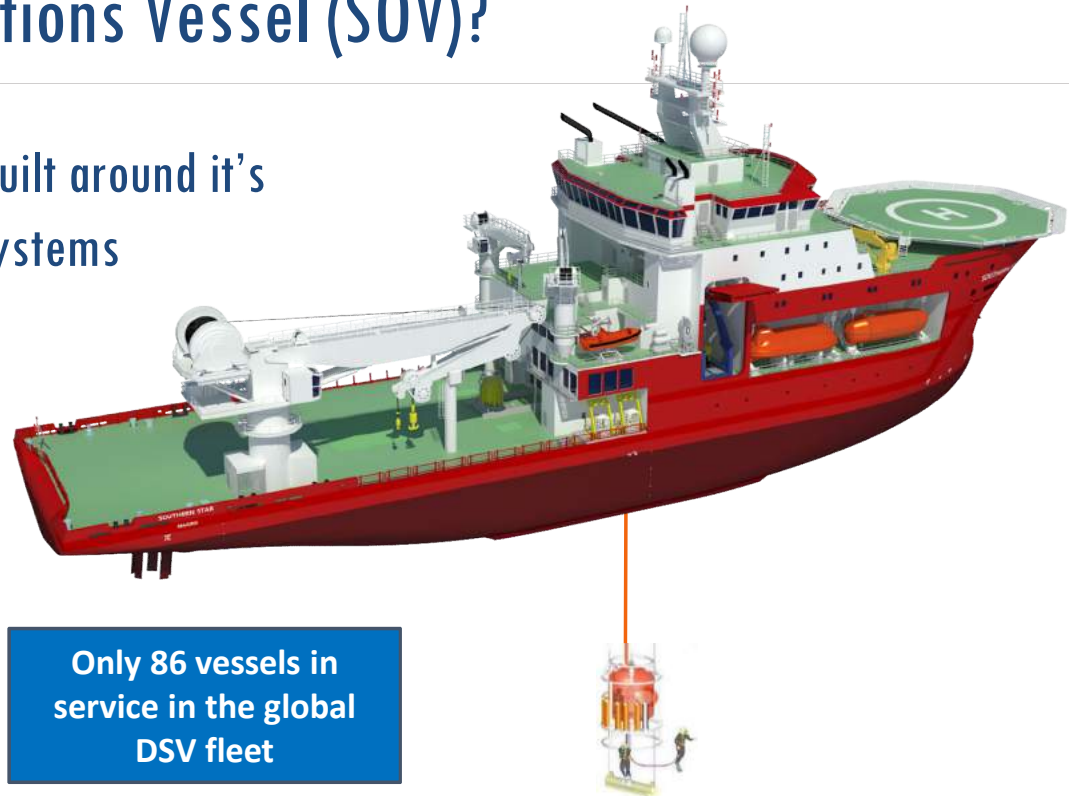
- Sanko Angel (2007) built in China for Jaya. Now named Carlisle. Essentially a DP2 flatback with 50T Subsea crane
- Ullswater (2008) was a John Giddens / Mike Meade design project on a 'limited' budget but was the first DSV with built in SAT System to be built is Asia (Pan United)
- Windermere (2010) was a 'step up' from Ullswater, Diesel electric with Voith Schneider Propulsion and built in SAT System – now named "Mermaid Nusantara"
- Hallin Marine was sold in 2010. "Coniston" was a design project that the new owners decided not to support. Tasik Subsea (John Giddens / Mike Meade) bought the design rights and developed what is now "SOV Southern Star"



What is a Subsea Operations Vessel (SOV)?

A Ship designed & built around it's Subsea Operating Systems

NOT a bunch of Subsea Operating Systems "shoe-horned" into a standard commodity design hull & machinery package !!



Only 86 vessels in service in the global DSV fleet

Key design features of our Vessel

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TASIK subsea

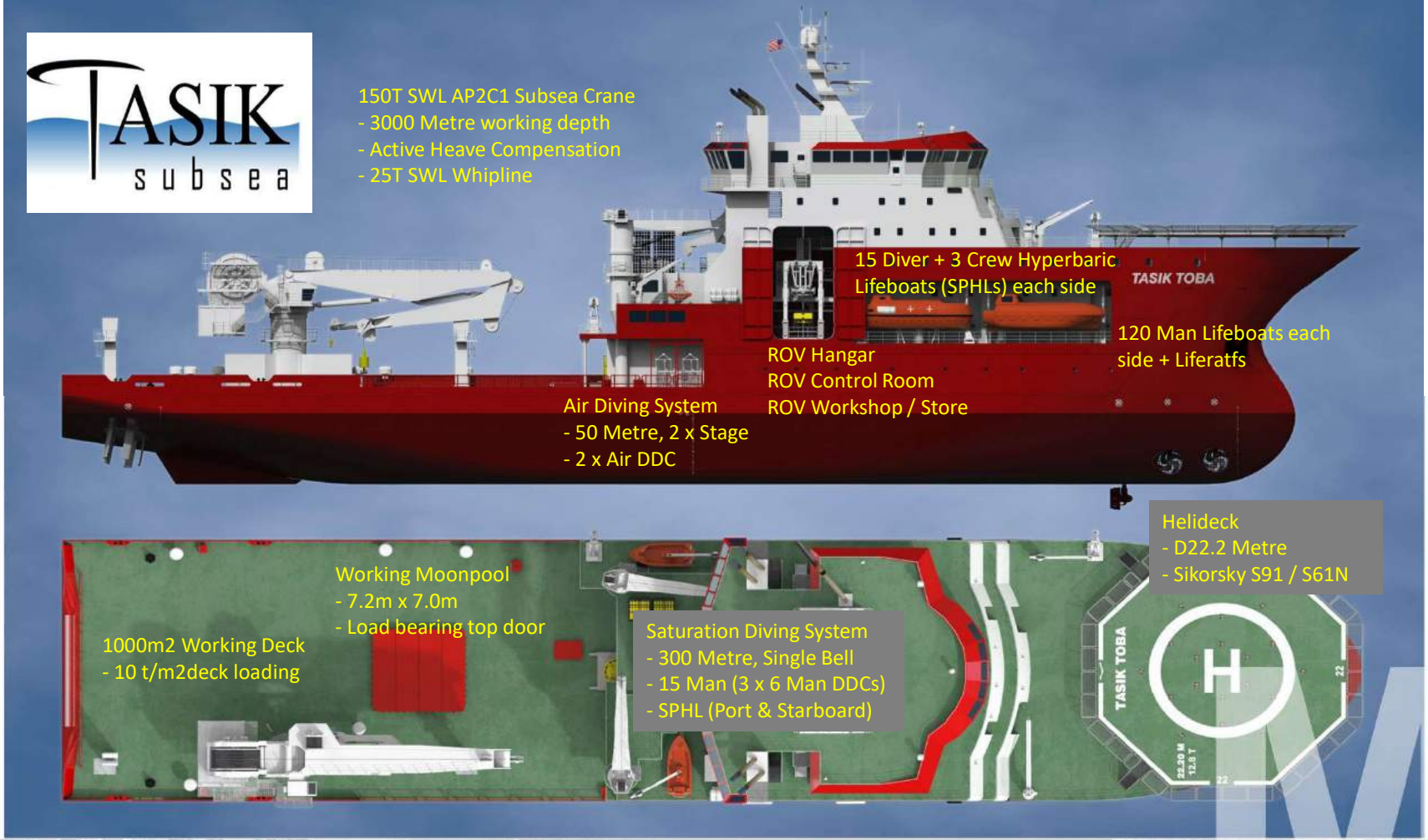
112Metre LOA
24 Metre Beam
Diesel Electric
DP3 - Kongsberg Dp22+1
- Dual GPS
- HiPapUSBL (2 x Transducer Poles)
- 2 x LW Taut Wire
- 1 x Dual Radius
- Various “Plug & Play” options

Marshal Islands Flag (or Charterers alternative)
Class: ABS
Notation: ABS✠A1(E) Offshore Support Vessel, (DSV SAT, SPS)✠ACC✠ENVIRO, GP✠DPS-3 BWT UWILD

2 x Tunnel Thrusters
1 x Retractable Azimuth Thruster

Voith Schneider Propulsion x 2
Active Roll Compensation mode

MARINE


TASIK subsea
150T SWL AP2C1 Subsea Crane
- 3000 Metre working depth
- Active Heave Compensation
- 25T SWL Whipline
15 Diver + 3 Crew Hyperbaric Lifeboats (SPHLs) each side
TASIK TOBA
120 Man Lifeboats each side + Liferatfs
ROV Hangar
ROV Control Room
ROV Workshop / Store
Air Diving System
- 50 Metre, 2 x Stage
- 2 x Air DDC
Helideck
- D22.2 Metre
- Sikorsky S91 / S61N
Working Moonpool
- 7.2m x 7.0m
- Load bearing top door
1000m2 Working Deck
- 10 t/m2deck loading
Saturation Diving System
- 300 Metre, Single Bell
- 15 Man (3 x 6 Man DDCs)
- SPHL (Port & Starboard)
TASIK TOBA
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State of the Art Engineering – from contract signing, over 1 year until we cut steel

Saturation Diving System

Operational Heart of the Ship

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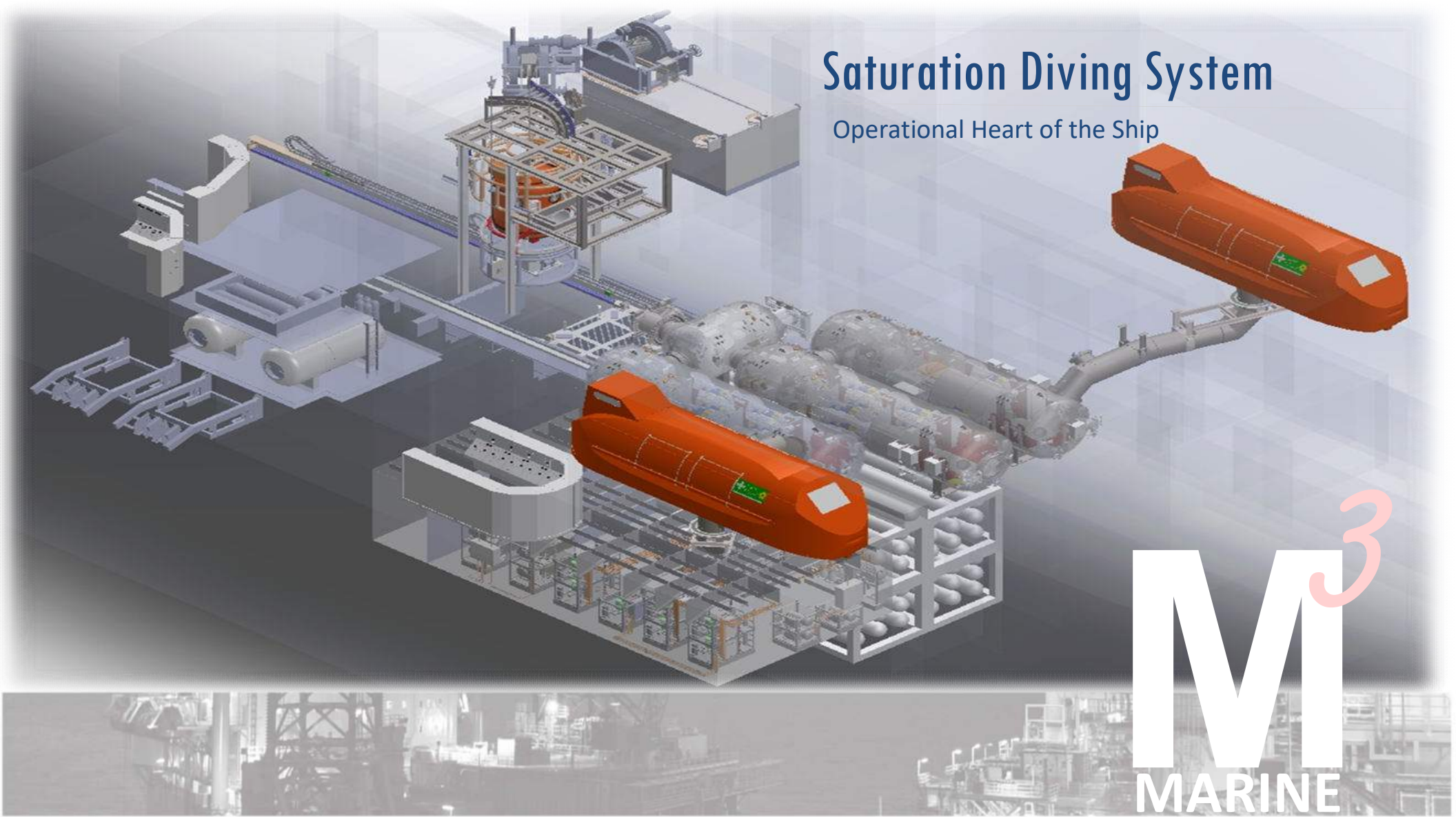
Saturation Diving System

Operational Heart of the Ship



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Accommodation / Habitability (Crew)

OBJECTIVE: A comfortable ship at a reasonable cost with full MLC 2006 compliance

- 120 Man Accommodation with optimized ambient lighting
  - 11 Suites with Dayroom
  - 25 x Single / 42 Twin
  - Hospital (2 Bed)
- Noise reduction measures included in design to Australian standard
- Crew Facilities include:
  - Messroom – Seats 92 / Sitting
  - Ergonomically designed galley / storeroom layout
  - Cinema – Seats 23
  - Gymnasium
  - Smoking Room
  - Prayer Room

Accommodation / Habitability (Client)

OBJECTIVE: A ship that Client Reps prefer…..

- "Premium" Client Suites on 4th Deck
- Satellite / Broadband Communications
- Internal LAN network
- Diving / ROV / Survey information distribution
- 2 x Conference Rooms (14 seat & 10 seat respectively)
- 4 x Project Offices
- Helideck unrestricted for current generation helicopters
    - Video briefing facilities
- Recent client "wish lists" incorporated in design
    - OGP Diving requirements
    - Shell DSV audit findings

Comparison with the Competition

Vessel	Tasik Toba, delivered 2017, DP3	Skandi Singapore, built 2011, DP2	Toisa Paladin, built 2007, DP2
Price	USD 107m	USD 200m	USD 160m
Owner	Tasik Subsea IS	DOF Subsea ASA	Sealion
Notations	ABS✠A1(E) Offshore Support Vessel, (DSV SAT, SPS)✠ACC✠ENVIRO, GP✠DPS-3 BWT UWILD	DNV✠1A1, ICE-C, COMF-V(3), HELDK, DSV-SAT, E0, DYNPOS-AUTR, NAUT-AW, CLEAN DESIGN, DK(+)	DNV + 1A1, Ice C, SF, COMF-V(3), HELDECK - S, DSV-Sat, E0, Dynpos AUTR, CLEAN, DK (+)
Dimensions	112m x 24m x 6.5m	107m x 21m x 7m	104m x 20m x 6m
Subsea Crane	150t SWL AP2C1 AHC Subsea knuckleboom crane - 3000 metre working depth	140t Offshore knuckleboom crane - 2,500 metre working depth	70t SWL Offshore knuckleboom crane 2000m working depth (140t 2-Fall to max 1000m)
Deck space	1,000m2 with 7.2m x 7.0m Working Moonpool	900m2	900m2
Saturation Diving System	▪ 300 meter, Single Bell ▪ 15 man (3 x 6 Man DDCs) ▪ SPHL 2 x 15 man SPHL ▪ Moonpool 4.2m x 4.2m	▪ 350 meter, Single Bell ▪ 18 man ▪ SPHL x 1 ▪ Moon pool 4.2 m x 4.2 m	▪ 300 meter, Single Bell ▪ 18 Man (1 x 3 divers ▪ SPHL 1x 18 man ▪ Moonpool 4x4.2m
Propulsion	2x Voith Schneider Propulsion 2,500Kw each (Active Roll Compensation)	4 x MAN 9L27/38 3,150 kW each	2x Aquamaster Azipull 2,200 kW each
Thrusters	Azimuth Thruster (Aft) 2 x 2,500 kW Tunnel Thrusters (Fwd) 2 x 1,200 kW Drop-down Thruster (Fwd) 1 x 1,000 kW	Azimuth Thrusters 2 x 3,000 kW + 1x 1,500 kW Tunnel Thrusters 2 x 1,500 kW	Azimuth thruster 1 x R-R 883 kW (1,200 BHP) Tunnel thruster 2 x R-R 1050 kW(1,400 BHP)
Helideck	Diameter 22.2 meter - Sikorsky S91/S61N	Diameter 21 meter - Sikorsky S92	Diameter 19.5m - Super Puma Type
Accommodation	120 pax	100 pax	100 pax

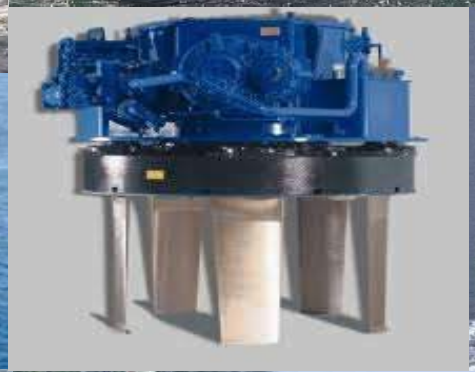
Increasing OSV's with Voith Propulsion

Windermere DP2 DSV

Kroonborg DP2 Walk to Work


Siem Moxie DP2 Walk to Work


MV Ya Toivo – DP 2 Subsea Mining Vessel




Seabed Worker DP2 ROV


Edda Fides DP3 Accomodation


North Sea Giant DP3 MPSV

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MARINE

Marine Engineering of Southern Star Design

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Propulsion & Machinery

Generators

- 4 x 2,500 kW Main Generators
- 1 x 1,100 kW Main Generator

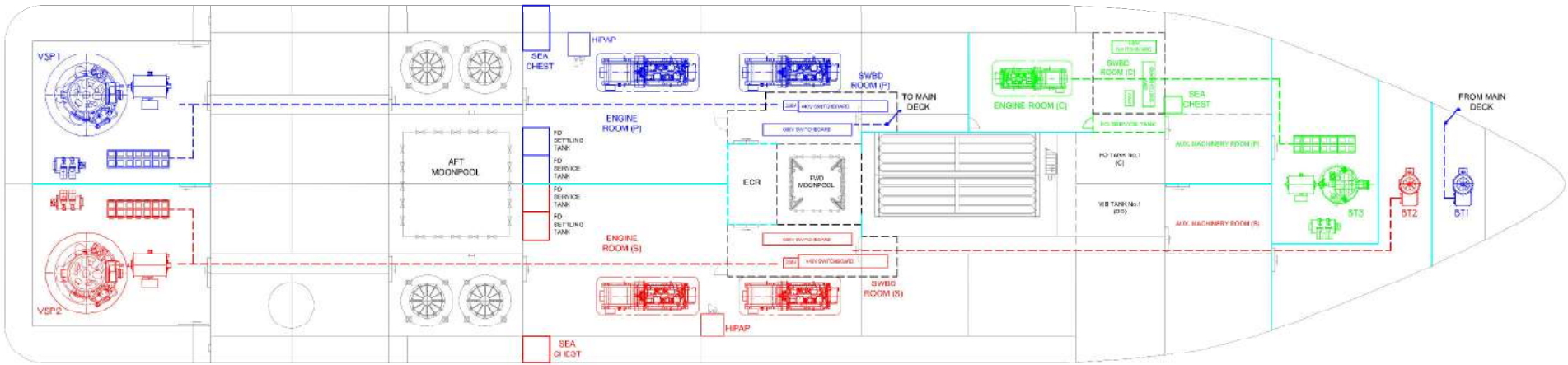
Thrusters

- 2 x 2,500 kW Voith Schneider Thrusters
- 1 x 1,000 kW Retractable Azimuth Bow Thruster
- 2 x 1,200 kW CPP Bow Tunnel Thrusters

Emergency Generators

- 2 – providing independent emergency supply for vessel & diving system

DP3 Safety through Redundancy



KEY:

BLUE	INDICATES REDUNDANT GROUP PORT
GREEN	INDICATES REDUNDANT GROUP CENTER
RED	INDICATES REDUNDANT GROUP STARBOARD
CYAN	INDICATES A60 BOUNDARY
----	INDICATES CABLES / PIPING

Design objectives:

- Maximize DP Performance & Operability
- Fuel efficiency
- Reduce through life maintenance costs

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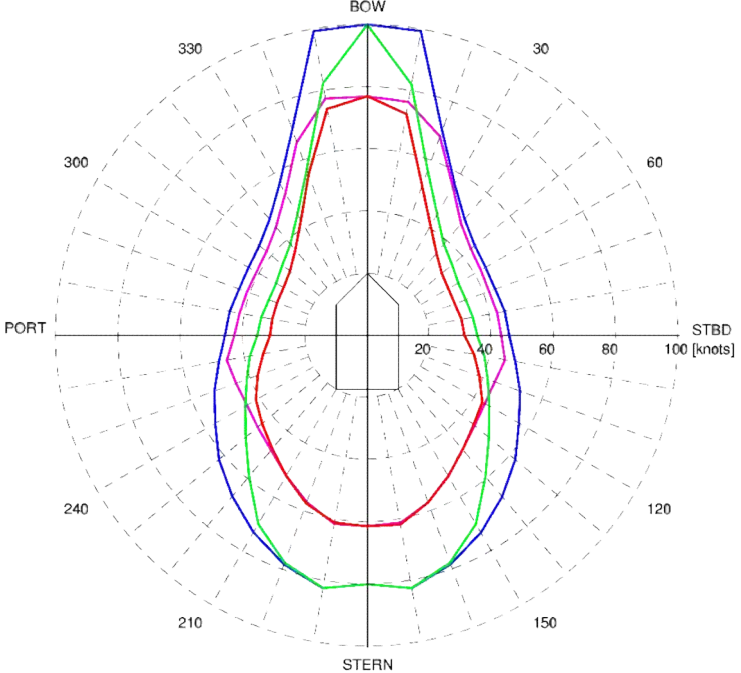
Southern Star DP Capability

DNV ERN: 99, 99, 95, 91



- **INTACT**
- **LOSS OF VSP1**
- **LOSS OF T1**
- **LOSS OF PORT ENGINE ROOM / BUS A**

CASE	Description	Wind Speed (knts)	Wind Direction (deg)	Hs (m)	Tz (sec)	Current (knots)	DNV ERN (%)
1	Intact	45.7	90	6.8	10.6	1.5	99
2	Loss of VSP1	43.0	90	6.3	10.4	1.5	99
3	Loss of T1	35.4	90	5.0	9.8	1.5	95
4	Loss of Port Engine Room / Bus A	31.1	90	4.4	9.3	1.5	91

Ceremonies & Videos of the Southern Star

M3 MARINE

Contract Signing

The contract for the construction of the vessel, then named 'Tasik Toba,' was signed with Fujian Mawei Shipyard in China on 6th August 2014.

The vessel's design and specification was developed by Tasik Subsea, a company set up by John Giddens & Mike Meade.

Southern Star Steel Cutting Ceremony

CHINA: 25th August 2015, first steel was struck on the 'Tasik Toba' ahead of schedule by John Giddens the founder and CEO of Tasik Subsea.

Southern Star Keel Laying Ceremony - 8th December 2015

China - hosted by the Chairman of Mawei Shipyard Zhang Zhitong along with senior members of the Fujian Shipbuilding Corporation, John Giddens of Tasik Subsea and Mike Meade of M3 Marine.

Southern Star Keel Laying Ceremony

Keel of the SOV Tasik Toba successfully laid at a ceremony held at the new Fujian Mawei shipyard on Culu Island in Fuzhou province, China on Tuesday 8th December 2015.

Ladies from M3 were present at the ceremony as well.

M3 MARINE

Southern Star (formerly Tasik Toba) Block Construction

3

MARINE

Launch of Southern Star

Fujian Mawei Shipyard Chairman Zhang Zhitong with John Giddens, CEO Tasik Subsea at the launch of the 'Southern Star'

'Southern Star' launched on 30th May 2016, the most advanced IACS Classed DSV to be built in China at the new graving dock in Culu Island, Fuzhou.

M3 MARINE

Launch of Southern Star

Southern Star – 'Sea Trials' December 2016

Including:

- Diving System FMECA & SDC Deepwater Test
- Emergency Bell Recovery Test
- IMCA D023 & D024 Audit – DDC Complex & SHPL Area

MARINE

What did We Achieve?

- Ordered a complex state of the art SOV in China.
- Contracted on 6th August 2014 for delivery in Q1 2017
  - Steel Cutting on 25th August 2015
  - Keel Laying on 8th December 2015
  - Launch on 30th May 2016
  - Sea Trials on 27th November 2016
- Delivery in January 2017
  - ➢ On Specification
  - ➢ On Time
  - ➢ On Budget

3

SOV Southern Star

Delivering Subsea Ships of the highest specification at a price (Capex & Opex) that fits today's cost focused market.

M3 MARINE