KIM HENG

BRIDGEWATER

RUHMMAZU



VESSEL PROFILE

Think Better • Do Better • Be Better

Owner & Operator of Marine & Offshore Support Vessels

- Provision of Ocean Towage & Transportation
- Provision of Heavy-lift & Equipment
- Emergency Salvage & Pollution Response
- Port & Marine Civil Engineering Infrastructure Projects

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KIM HENG

BRIDGEWATER OFFSHORE PTE LTD

VESSEL LIST

No	VESSEL	Type	GRT / NRT	BHP	BP (Ton)	LOA (M)	DWT (MT)	Deck Area (M2)	FiFi	Year Built	Flag
LONG DISTANCE TOWING SALVAGE ANCHOR HANDLING TUG											
1	Bridgewater 168	AHT	2658 / 797	12000	156	68	2800	380	1	2007	SGP
DYNAMIC POSITIONING, FIFI 1 ANCHOR HANDLING SUPPLY TUG											
2	Bridgewater 130	AHTS-DP2	2708 / 812	10800	130	70	2180	500	1	2009	SGP
3	Bridgewater 131	AHTS-DP2	2708 / 812	10800	130	70	2180	500	1	2009	MY
4	Bridgewater 132	AHTS-DP2	2708 / 812	10800	130	70	2180	500	1	2010	MY
5	Mazu 60	AHTS-DP1	1678 / 503	5150	65	60	1356	360	1	2011	MY
6	Bridgewater 63	AHTS	1678 / 503	5150	65	60	1360	360	1	2010	MY
UTILITY TOWING TUG											
7	KH3803	Utility Tug	641 / 192	3880	45	45	576	160	1/2	2007	MY

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BRIDGEWATER 168

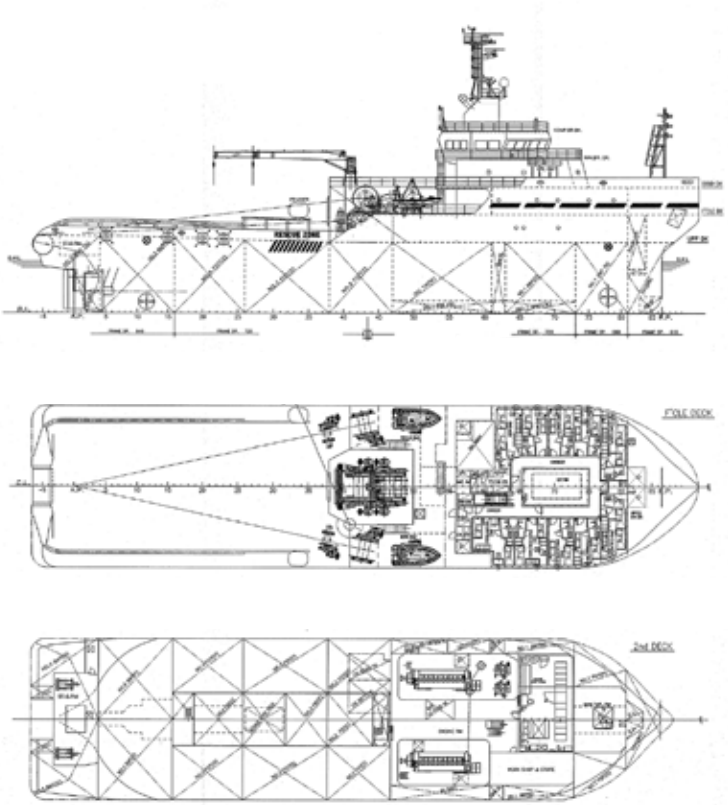
12,000BHP 156TBP 68M AHT FiFi 1/2



12,000BHP 156TBP Anchor Handling Tug
Long Distance Ocean Towage & Salvage

Features

- 12,000 BHP (9,000KW) Controllable Pitch Propulsion
- 800kw Bow Thruster and 600kw Stern Thruster
- Fuel Capacity : 2050 MT // Clear Deck 380 m2
- Deadweight Capacity 2,800 MT
- Emergency Rescue & Salvage & Oil Spill Response
- Fire-Fighting FiFi ½ Foam / Water Dual Monitor
- V-SAT Ku Band Intellian V85
- Environmental IMO Compliance
- Accommodation for 36 person
- 16 cabins with ensuite bathroom
- 6 Single Berth Cabin / 5 Double Berth Cabin / 5 x 4 Berth Cabin
- 1 Ship Office & Instrument Room
- 1 x 2 Berth Hospital Cabin with Ensuite Bathroom
- Galley with 2 Mess Room
- Recreation Room & Gym Facility
- Laundry Room
- PPE Changeout with Ensuite Bathroom



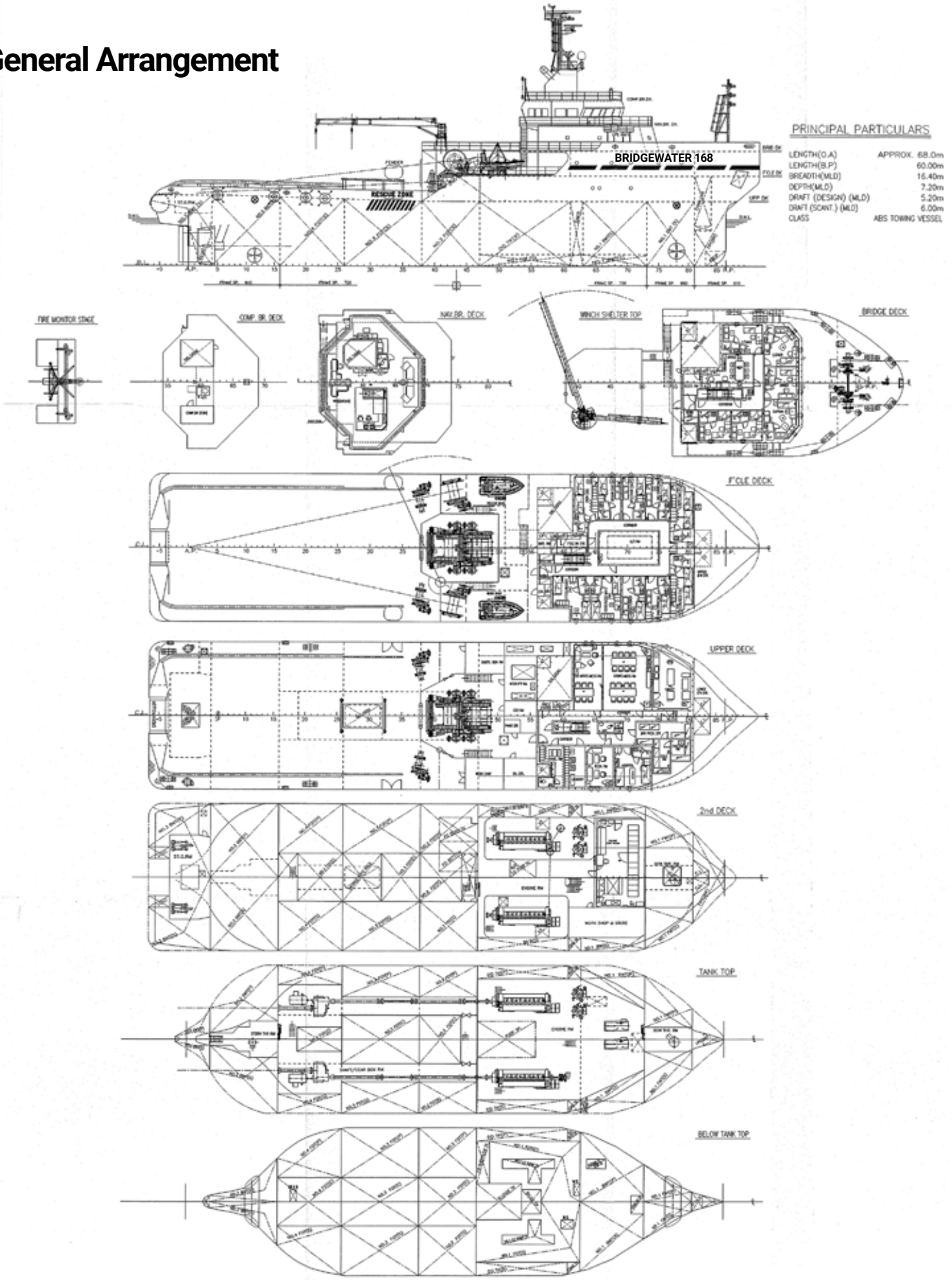
Specifications given herein are believed to be correct but no guaranteed

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BRIDGEWATER 168

12,000BHP 156TBP 68M AHT FiFi 1/2

General Arrangement



Specifications given herein are believed to be correct but no guaranteed

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BRIDGEWATER 168

12,000BHP 156TBP 68M AHT FiFi 1/2

MAIN PARTICULARS	
Vessel Name	BRIDGEWATER 168
IMO No.	9351830
Year Built	2007-03
Place Built	Japan Marine United Corp JAPAN
Port - Flag Registry	SINGAPORE
Callsign	S6HA6
Official No.	392060
GRT / NRT	2658 / 797
ABS Class Certificate No.	07161528
Class Notation	ABS ✠A1 Anchor Handling Towing Salvage Tug Circle E ✠ AMS Unrestricted Navigation
MMSI	565337000

DIMENSIONS	
Length - OA	68.00 M
Length - BP	60.00 M
Breadth - Moulded	16.40 M
Depth - Moulded	7.20 M
Designed Draft	5.20 M
Deadweight @ 6.00M draft	2800 tons Indicatively
Main Cargo Deck (L x B)	27.0 M X 13.3 M
Free Deck Area	380 M2
Salvage Rope Hold (on deck)	71 m3

BULK CAPACITIES	
Fuel Oil (LSMGO)	2050 m3
Diesel Oil Tank	200 m3
Fresh Water	185.0 m3
Water Ballast	980.0 m3
Diesel Oil Service Tank	17 m3
Lube Oil Tank	24 m3
Sludge Tank	25 m3
Dirty Oil Tank / Bilge Tank	1 m3 / 7 m3

MACHINERY	
Main Engine Propulsion	2 x 4500kw@750rpm Wartsila 9L32 Diesel Engine SCH75-P53 CPP Propeller in Kort Nozzle
Bow Tunnel Thruster	1 x 12te thrust @ 800kw RR Kamewa TT1850
Stern Tunnel Thruster	1 x 9.2te thrust @ 590kw RR Kamewa TT1650
Auxilliary Diesel Genset	2 x 300kw Leroy LSAM47.2M7 MAN D2876LE301
Shaft Generator	2 x 1200kw 415V/3P/50Hz Wartsila DSG74L2-4W
Emergency / Harbor Genset	1 x 60kw Leroy LSAM44.2VS3 MAN D0824LE201
Main Air Compressor	2 x 22m3/h Sanwa S8A 2 stage Air cooled
Aux Service Air Compressor	1 x 30m3/h Sanwa S10A 2 Stage Air cooled

PERFORMANCE & CONSUMPTION	
Maximum Speed @design draft	14.5 Kts @ 46 mt/day (@100% MCR)
Service Speed (Full Ahead)	13 Kts @ 38 mt/day (@85% MCR)
Service Speed (3/4 Ahead)	11 Kts @ 31mt/day (@70% MCR)
Economical Speed (Half Ahead)	9.0 Kts @23 mt/day (@57% MCR)
Slow Speed (Slow Ahead)	6.0 kts @21 mt /day (@52% MCR)
Outport Standby Operations	6.0 mt / day
Anchor in Port	1.5mt / day

ANCHOR HANDLING TOWING EQUIPMENT	
Bollard Pull Approximately	156 tonnes
Anchor Handling Towing Winch	Double drum waterfall Brattvaag SL300/ BSL300W
Line Pull Capacity	300 tonnes @ 1st layer
Brake Holding Capacity	400 tonnes @ 1st layer
Towing Drum Capacity Max	Wire diameter 76mm x 1500 m length
Anchor Handling Drum Max	Wire diameter 76mm x 1500 m length
Storage Reel w/spare wire	Wire diameter 76mm x 1500 m length
Towing Pins	1 x Karmoy Retractable SWL 200 tonnes
Shark Jaws / Karm Fork	1 x Karmoy Retractable SWL 350 tonnes
Stern roller Manabe Zoki	Dia. 2m x Length 4.5m SWL 350 tonnes

DECK MACHINERY AND MOORING EQUIPMENT	
Recovery / Tugger Winch	2 x SWL 20 te RECW3-20/610 Dia 26mm x 200m
Capstan	2 x SWL 10 te HCAS-10/450 Electro Capstan
Deck Crane	1 x SWL 2t @14m Hyd Telescopic TTS GPT 80-2-14
Anchor Windlass	1 x SWL 10te F3236-W210 double gypsy windlass with 2 warping drum
Anchor Chain	2 x dia 38 mm x 880 m U3 studlink anchor chain
Anchor	2 x AC14 HHP 1710Kg Anchor

OWNER / MANAGER	BRIDGEWATER OFFSHORE PTE LTD KIM HENG MARINE & OILFIELD PTE LTD
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Telephone / Fax	(65) 6777 9990 / (65) 6778 9990

BRIDGE NAVIGATION EQUIPMENT	
S-Band Radar 10cm ARPA28	1 x Furuno FAR 2117S
X-Band Radar 3cm ARPA28	1 x Furuno FAR 2137S
Auto Pilot cw rudder Indicator	Tokimec PR-6000
Magnetic Compass	2 x Tokimec SH-165A1
Gyro Compass	Tokimec TG-8000 /8500
Echo Sounder	Furuno FE-700 with repeater FE--720
AIS	Furuno FA-150
Navtex	Furuno NX-700 with printer NX-700A
Weather Fax	Furuno FAX-410
Wind Vane Anemometer	Nippon Electric N-52+8205
Doppler Speed Log	Furuno DS-80
DGPS	FURUNO MD-550
GPS	2 x FURUNO GP-150
ECDIS (Multi function display)	TRANSAS Navi-Sailor 4000

BRIDGE COMMUNICATION & MONITORING EQUIPMENT	
IMMARSAT Comm C	Furuno FELCOM 15
Marine SSB Radio system	Furuno FS2570C / HS2001
VHF DSC	2 x Furuno FM8800S
Portable VHF (GMDSS)	3 set ENTEL HT649
EPIRB 406 / 121.5 mhz /Sart	THRANE SE406-11 / Ocean Signal S100
Potable VHF(fire fighting)	2 ENTEL HT944
Portable VHF Radio	5 x Motorola GP328
Towing & Anchoring Handling	Fukushima Control Panel
Loud Hailer TalkBack System	Nippon Hakuyo OHE-3167A
CCTV surveillance system	Anchor Handling & Bridgewatch
Auto Telephone	Nippon Electronic OAE-7116
BNWAS System	Tokyo Keiki ADO-001
V-SAT Ku Band Intellian V85 with 1024/ 512 MIR 128/64 CIR	

FIRE FIGHTING CAPABILITY - ABS FiFi Class 1	
Main Ship Fire Pump	1 x 75m3/h @90m head
Emergency Fire Pump	1 x 40m3/h @50m head
Dual Foam/Water Monitor	2 x 600m3/h @120m
Ext Fire Pump Jason SRG256K01	1 x 1200m3/h @140M head
Aker Kvarner JASON Eureka Fire Fighting 1/2 system	
Foam (Fire fighting) Tank	13 m3
Water Curtain Spray System	Accommodation & main deck
Consilium NSAC-1 Fixed Fire Fighting CO2 system	

LIFE SAVING AND STANDBY RESCUE CAPABIITY
Fitted in Compliance with IMO SOLAS (1974) Approved
NDA16 SWL 21kN Launching & Recovery System for MOB/FRC
NDA16 Davit with 6-pax Norsafe MK II Rigid Fast Rescue Boat
NDA16 Davit with 6-pax Norsafe MK I Rigid Work Boat

ANTI POLLUTION & SALVAGE CAPABILITY	
Dispersant Storage Capacity	13 m3
Dispersant Spray Boom 6Mtr	2 Set
Emergency Anti Pollution Kit	1 set
External Oil Recovery System	Optional IMO TIER 1 Capability

ACCOMMODATION & FACILITIES
Namirei Showa NSAS-W4004A Airconditioning System for 36 Persons
16 Cabins : 6 Single Berth; 5 x 2 Berth; 5 x 4 berth c/w Ensuite Bathroom
1 Hospital cw 2 x Single Berth , Ship Office, Instrument Room
Galley, Mess Room, Recreation Room, Gymnasium Room
Dry Provision Store, Cold Room & Freezer Room
1 x Laundry Room ; 1 x PPE Change Out locker Room

ENVIRONMENTAL IMO MARPOL COMPLIANCE
Taiko Kikai SBT40 SCT-200P Sewage Treatment Plant
15-ppm Taiko Kikai USH-05 Oily Water Separator of 0.5m3/hr
Water Maker Sasakura KE-15 15 m3/day
Alfa Laval SA821 fuel Oil Purifier Self Sludge Discharge
Anti Air Pollution Engines Exhaust System
Salvage Wreck Recovery &Oil Spill containment Capability

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BRIDGEWATER 130

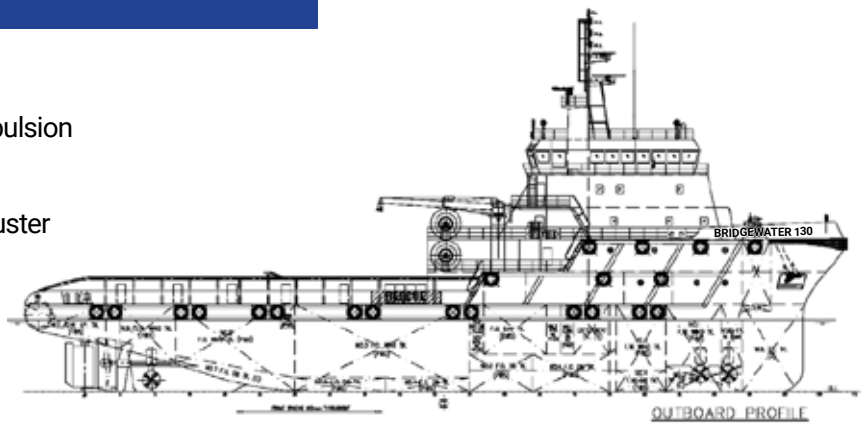
10,800BHP 70M AHTS DP2 FiFi 1



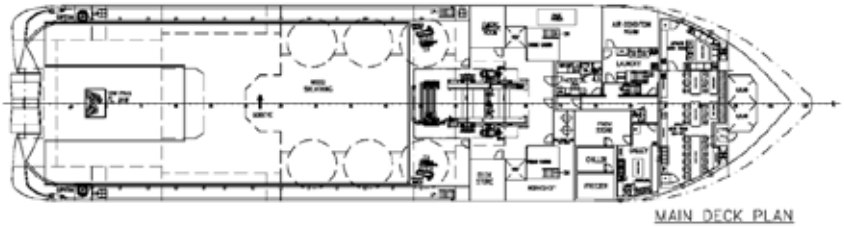
10,800BHP 130TBP DP2 FIFI 1
Anchor Handling Tug Supply
Standby Escort Rescue Tug

Features

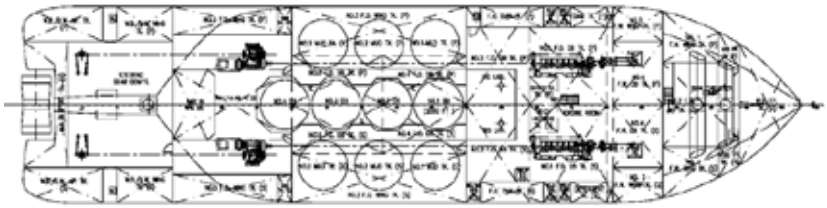
- 10,800 BHP (8,000KW) Controllable Pitch Propulsion
- 120MT to 135MT Bollard Pull
- 2 x 800kw Bow Thruster & 1 x 800kw Stern Thruster
- Fuel Capacity: 1200 MT // Clear Deck : 500 M2
- Deadweight Capacity : 2180MT
- Dynamic Positioning DP-2 System
- Fire-Fighting FiFi Class 1
- CCTV Ship Security & Operations
- V-SAT Ku Band Intellian V85
- Anti Pollution Oil Spill Response
- Environmental IMO Compliance
- Accommodation Total 40 Berths
- 27 Cabins c/w Ensuite Bathroom
- 10 Single & 15 Double Cabin
- 1 Hospital Cabin
- 1 Ship Office Cabin
- Galley with Messroom for 30 persons
- Recreation & Laundry Room



OUTBOARD PROFILE



MAIN DECK PLAN



BELOW DECK PLAN

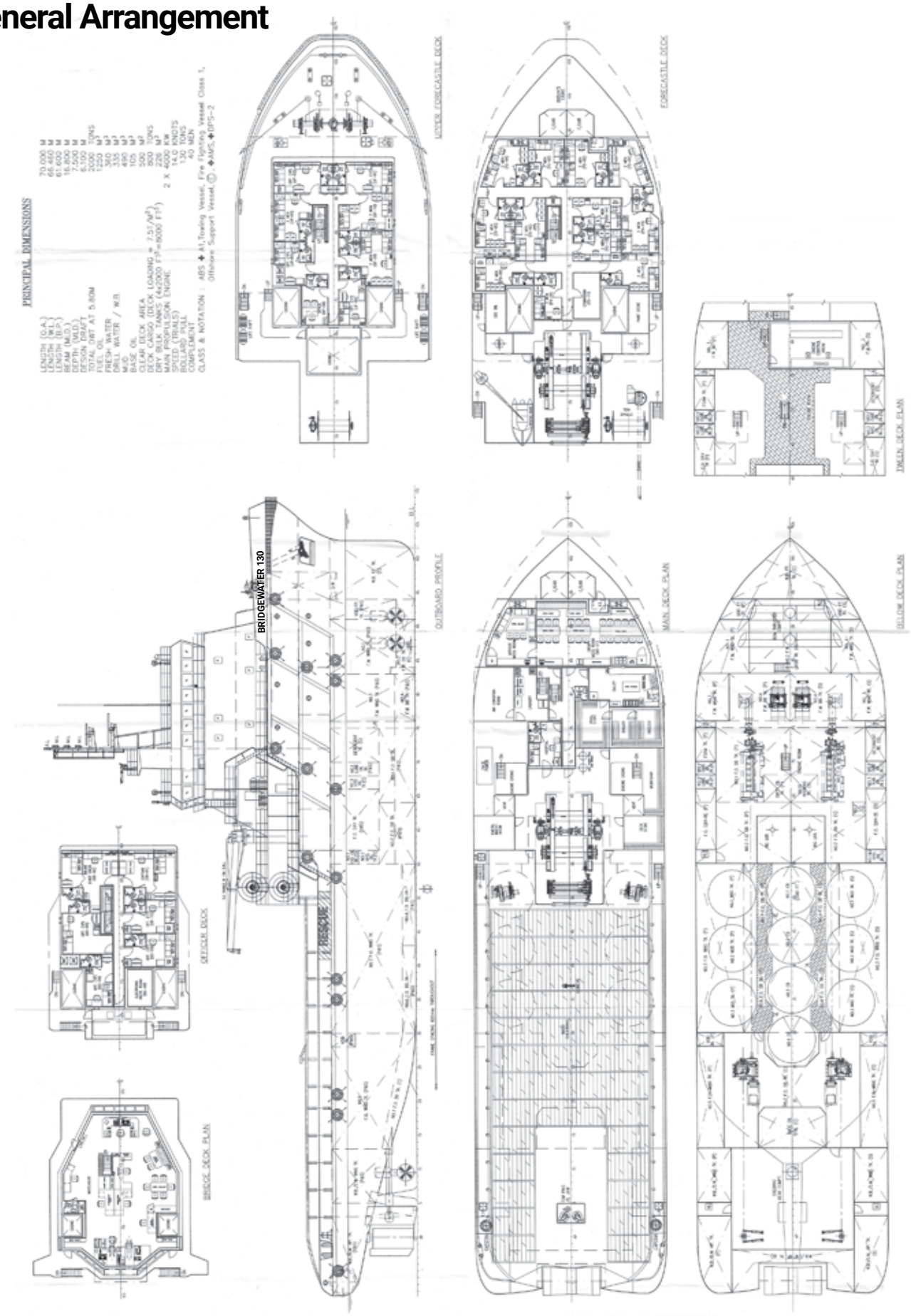
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BRIDGEWATER 130

10,800BHP 70M AHTS DP2 FiFi 1

General Arrangement



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BRIDGEWATER 130

10,800BHP 70M AHTS DP2 FiFi 1

MAIN PARTICULARS	
Vessel Name	BRIDGEWATER 130
IMO No.	9555395
Year Built	2009-08
Place Built	Fujian Southeast Shipyard-China
Port - Flag Registry	SINGAPORE
Callsign	9V5660
Official No.	401182
GRT / NRT	2708 / 812
Class Notation A B S	✠A1 Anchor Handling Towing Vessel FiFi Class 1 Offshore Support Vessel (E)✠AMS ✠ DPS-2 Unrestricted Navigation

DIMENSIONS	
Length - OA	70.00 M
Length - BP	64.00 M
Breadth - Moulded	16.80 M
Depth - Moulded	7.50 M
Draft - Moulded	6.10 M
Deadweight Max Capacity	2180 tonnes
Deck cargo capacity	700 tonnes
Main Cargo Deck (L x B)	33.5M X 13.5M
Deck Strength	7.5 Tonnes /M2
Deck Area	500 M2

BULK CAPACITIES		TRANSFER RATE
Fuel Oil	1221 m3	1 x 150m3/h @75m head
Fresh Water	393.5 m3	1 x 150m3/h @75m head
Ballast/Drill Water	1339.7 m3	1 x 150m3/h @75m head
Liquid Mud / Brine	490 m3	2 x 75m3/h @75m head
Base Oil	104 m3	1 x 61m3/h @90m head
Dry bulk mud / cement	226 m3	2 x 18m3/h @80psi

MACHINERY	
Main Engine Propulsion	2 x 4000kw@750rpm Wartsila 8L32 Diesel Engine CPP Propeller in Kort Nozzle Total 10800bhp
Bow Tunnel Thruster CPP	2 x 600kw(800bhp) Wartsila CT175H-D 9.5te thrust
Stern Tunnel Thruster CPP	1 x 600kw(800bhp) Wartsila CT175H-D 9.5te thrust
Auxilliary Diesel Generator	2 x 350kw Leroy 415V/3P/50Hz Caterpillar C18
Shaft Generator	2 x 1600kw 415V/3P/50Hz Marelli Motori
Emergency Generator	1 x 65kw/415V/3P/50Hz Caterpillar C4.4
Bulk Air Compressors	2 x Airman SWS125/18m3/h x 80 PSI
Service Air Compressors	2 x Sperre PL2 /77 3.3Mpa

PERFORMANCE & CONSUMPTION	
Maximum Speed	14 Kts @ 35 mt/day (@100% MCR)
Service Speed	12 Kts @ 23 mt/day
Ecnomical Speed	10 Kts @ 18 mt/day
Anchor Handling Towing	23 mt / day
DP Operations	15 mt / day
Outport Standby	9 mt / day
Anchor in Port	0.9 mt / day

ANCHOR HANDLING TOWING EQUIPMENT	
Bollard Pull	125 tonnes - - 135 tonnes approximately
Anchor Handling Towing Winch	Double drum waterfall Brattvaag SL300/ BSL300W
Line Pull Capacity	300 tonnes @ 1st layer
Brake Holding Capacity	450 tonnes @ 1st layer
Towing Drum Capacity	Wire diameter 76mm x 2000 m length
Anchor Handling Drum	Wire diameter 76mm x 2000 m length
Storage Reel w/spare wire	Wire diameter 76mm x 2000 m length
Storage Reel w/spare wire	Pendant wires & 300m work wire dia 76mm
Rig Chain Gypsy	1 x 76mm 1 x 90mm
Chain Locker	2 x 70 m3
Towing Pins	1 x Karmoy Retractable SWL 500 tonnes
Shark Jaws / Karm Fork	1 x Karmoy Retractable SWL 500 tonnes
Stern roller	Dia 2.2m x Length 5m SWL 500 tonnes

DECK MACHINERY AND MOORING EQUIPMENT	
Tugger Winch	2 x SWL 10 tonnes Brattvaag LAKMX41015
Capstan	2 x SWL 10 tonnes Rolls Royce LC-XX41015
Deck Crane	1 x SWL 5ton @ 15m Telescopic Provision Crane
Anchor Windlass	1 x SWL 14 tonnes Brattvaag double gypsy windlass with 2 warping drum
Anchor Chain	2 x dia 46 mm x 440 m studlink anchor chain
Anchor	2 x AC14 HHP 2046Kg anchor

OWNER / MANAGER	BRIDGEWATER OFFSHORE PTE LTD KIM HENG MARINE & OILFIELD PTE LTD
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Telephone / Fax	(65) 6777 9990 / (65) 6778 9990

BRIDGE NAVIGATION EQUIPMENT	
S-Band Radar 10cm ARPA28	1 x Furuno FAR 2117S
X-Band Radar 3cm ARPA28	1 x Furuno FAR 2137S
Auto Pilot	Raytheon Anschutz Pilot Star D NP-2015
Magnetic Compass	Saura ME-150
GPS	Furuno GP-150
Echo Sounder	Furuno FE-700 with printer
AIS	Furuno FA-150
Navtex	Furuno NX-700
Weather Fax	Furuno FAX-408
Anemometer	2 x Young Wind Tracker
Doppler Speed Log	Furuno DS-80

DYNAMIC POSITIONING SYSTEM ABS ✠ DPS-2	
DP Control System	Converteam DP-21
Gyro Compass	3 x Raytheon Anschutz STD22
DGPS Reference System	2 x DGPS Veripos LD3-G1 Cyscan MK2
VRU	1 x TSS DMS RP30
Wind Sensor	3 x Gill Wind Observer 2

BRIDGE COMMUNICATION & MONITORING EQUIPMENT	
IMMARSAT Comm C	Furuno FELCOM 15
Marine SSB Radio system	Furuno FS2570C / HS2001
VHF DSC	2 x Furuno FM8800S
Portable VHF (GMDSS)+battery	3 set McMurdo SART S4
EPIRB 406 / 121.5 mhz	McMurdo E3
Satellite Phone	Sailor Thrane & Thrane
Portable VHF Radio	2 x ICOM GM-1500
Towing & Anchoring Handling	Rolls Royce AHT Control panel
Bulk Handling System	Unislip Bulk Handling System
CCTV surveillance system	Anchor Handling & Bridgewatch
PA System	Vingtor 250W
BNWAS System	Fitted
V-SAT Ku Band Intellian V85 with 1024/ 512 MIR 128/64 CIR	

FIRE FIGHTING CAPABILITY - ABS FIFI CLASS 1	
Main Ship Fire Pump	1 x 75m3/h @90m head
Emergency Fire Pump	1 x 35m3/h @50m head
Water / Foam Monitor	2 x 1200m3/h @160m Throw
External FiFi Pump	2 x 1500m3/h @14bar
FFS/Scanpump SPP250 x 350 HD Hydrakit system	
FOAM Capacity	21.5m3
Water Curtain Spray System	Accommodation & main deck
Fixed Fire Fighting CO2 system for machinery system	

LIFE SAVING AND STANDBY RESCUE CAPABIITY	
Fitted in Compliance with IMO SOLAS (1974) Approved	
SWL 21kN Launching & Recovery System for MOB/FRC	
Fast Rescue Craft FRC-6pax	Zodiac Inflatable Rescue Craft
RESCUE ZONE	2 Zones Scrambling Net fitted

ANTI POLLUTION CAPABILITY	
Dispersant Storage Capacity	21.5m3
Dispersant Spray Boom 6Mtr	2 Set
Emergency Anti Pollution Kit	1 set
External Oil Recovery System	Optional IMO TIER 1 Capability

ACCOMMODATION & FACILITIES	
Accommodation fitted with Airconditioning System	
25 Cabins -Total 40 Persons	10 x Single Berth 15 x Double Berth
1 x Hospital Cabin Single Berth	Ship Office, DP2 Instrument Cabin
Galley, Mess Room, Recreation Room, Gymnasium Room	
2 x JCU IVY Refrigeration fitted Cold Room , 1 x dry provision store	
Laundry Room and Workwear PPE Changeout Zone	

ENVIRONMENTAL IMO MARPOL COMPLIANCE
WCB-50 pax holding capacity Sewage Treatment Plant
15-ppm Taiko Kikai Oily Water Separator of 1m3/hr
Water Maker Sea Recovery Coral Sea 2800 Rev Osmosis 10 m3/day
Domestic Sanitary system 500Litres Hydrophore tank unit
Anti Air Pollution Engines Exhaust System
Bulk Cargo load/discharge station spill containment

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BRIDGEWATER 131

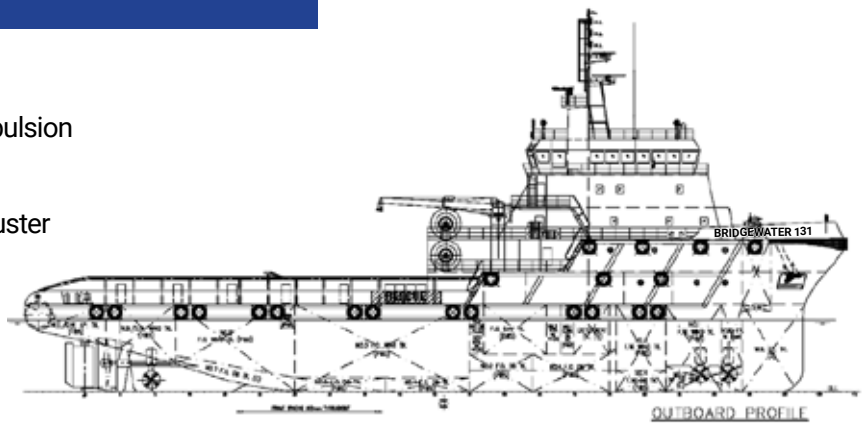
10,800BHP 70M AHTS DP2 FiFi 1



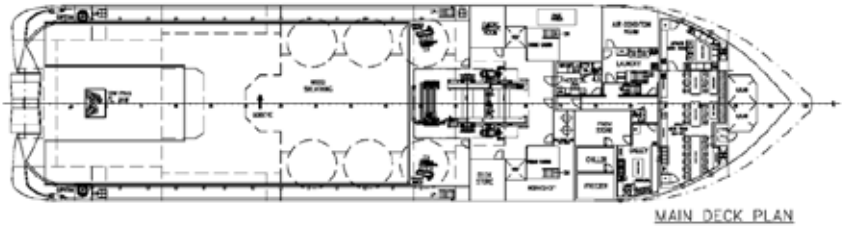
10,800BHP 130TBP DP2 FIFI 1
Anchor Handling Tug Supply
Standby Escort Rescue Tug

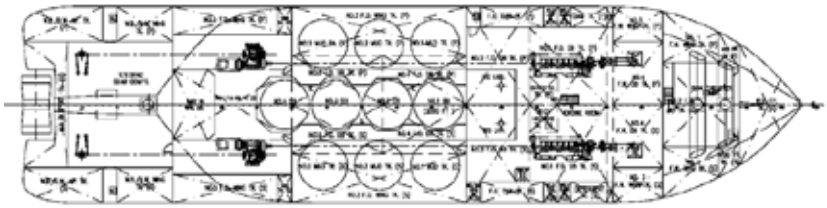
Features

- 10,800 BHP (8,000KW) Controllable Pitch Propulsion
- 120MT to 135MT Bollard Pull
- 2 x 800kw Bow Thruster & 1 x 800kw Stern Thruster
- Fuel Capacity: 1200 MT // Clear Deck : 500 M2
- Deadweight Capacity : 2180MT
- Dynamic Positioning DP-2 System
- Fire-Fighting FiFi Class 1
- CCTV Ship Security & Operations
- V-SAT Ku Band Intellian V85
- Anti Pollution Oil Spill Response
- Environmental IMO Compliance
- Accommodation Total 40 Berths
- 27 Cabins c/w Ensuite Bathroom
- 10 Single & 15 Double Cabin
- 1 Hospital Cabin
- 1 Ship Office Cabin
- Galley with Messroom for 30 persons
- Recreation & Laundry Room



OUTBOARD PROFILE


MAIN DECK PLAN


BELOW DECK PLAN

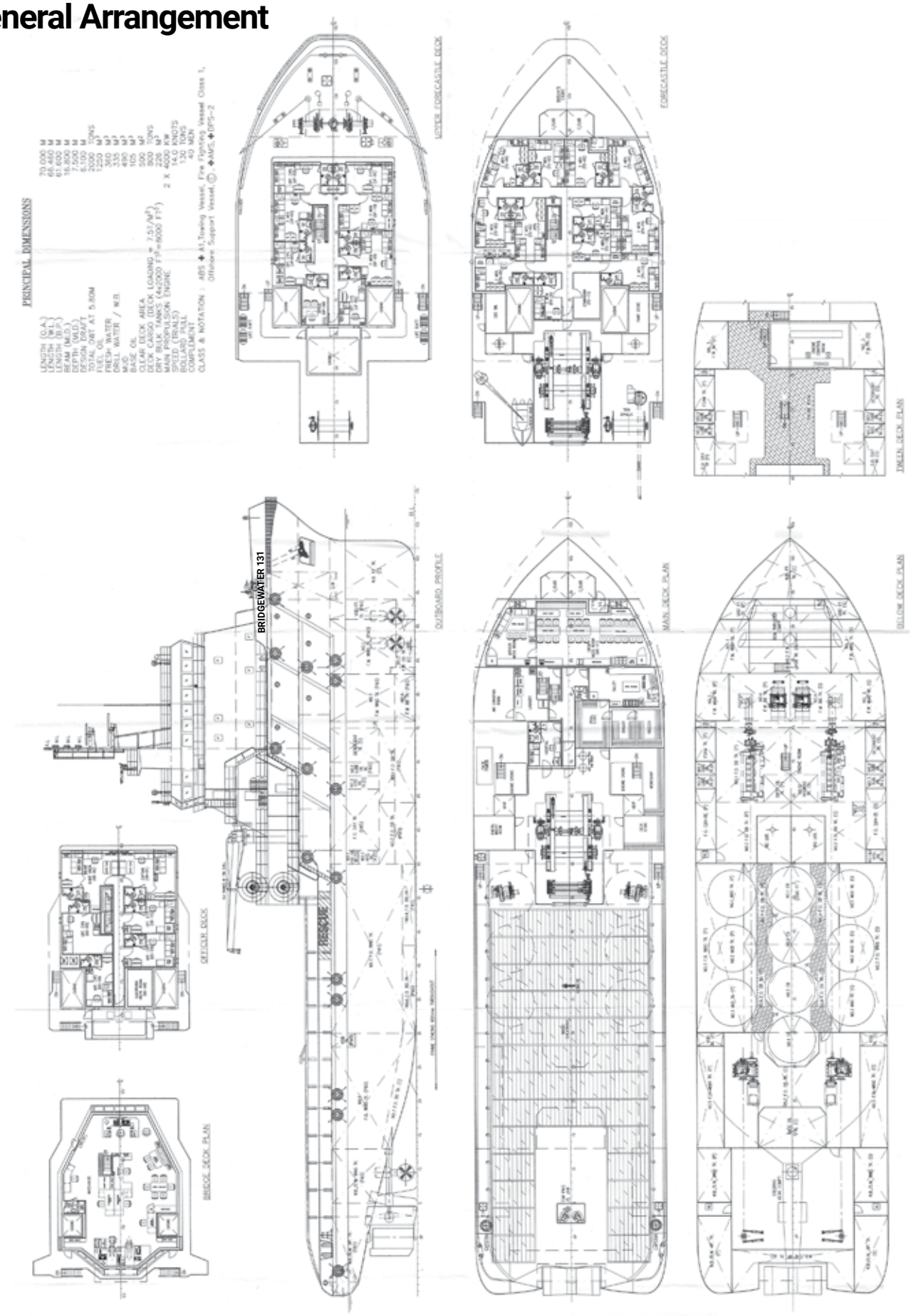
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BRIDGEWATER 131

10,800BHP 70M AHTS DP2 FiFi 1

General Arrangement



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BRIDGEWATER 131

10,800BHP 70M AHTS DP2 FiFi 1

MAIN PARTICULARS	
Vessel Name	BRIDGEWATER 131
IMO No.	9555412
Year Built	2009-12
Place Built	Fujian Southeast Shipyard-China
Port - Flag Registry	Port Kelang, Malaysia
Callsign	9MYE2
Official No.	336814
GRT / NRT	2708 / 812
Class Notation A B S	✠A1 Anchor Handling Towing Vessel FiFi Class 1 Offshore Support Vessel (E)✠AMS ✠ DPS-2 Unrestricted Navigation

DIMENSIONS	
Length - OA	70.00 M
Length - BP	64.00 M
Breadth - Moulded	16.80 M
Depth - Moulded	7.50 M
Draft - Moulded	6.10 M
Deadweight Max Capacity	2180 tonnes
Deck cargo capacity	700 tonnes
Main Cargo Deck (L x B)	33.5M X 13.5M
Deck Strength	7.5 Tonnes /M2
Deck Area	500 M2

BULK CAPACITIES		TRANSFER RATE
Fuel Oil	1221 m3	1 x 150m3/h @75m head
Fresh Water	393.5 m3	1 x 150m3/h @75m head
Ballast/Drill Water	1339.7 m3	1 x 150m3/h @75m head
Liquid Mud / Brine	490 m3	2 x 75m3/h @75m head
Base Oil	104 m3	1 x 61m3/h @90m head
Dry bulk mud / cement	226 m3	2 x 18m3/h @80psi

MACHINERY	
Main Engine Propulsion	2 x 4000kw@750rpm Wartsila 8L32 Diesel Engine CPP Propeller in Kort Nozzle Total 10800bhp
Bow Tunnel Thruster CPP	2 x 600kw(800bhp) Wartsila CT175H-D 9.5te thrust
Stern Tunnel Thruster CPP	1 x 600kw(800bhp) Wartsila CT175H-D 9.5te thrust
Auxilliary Diesel Generator	2 x 350kw Leroy 415V/3P/50Hz Caterpillar C18
Shaft Generator	2 x 1600kw 415V/3P/50Hz Marelli Motori
Emergency Generator	1 x 65kw/415V/3P/50Hz Caterpillar C4.4
Bulk Air Compressors	2 x Airman SWS125/18m3/h x 80 PSI
Service Air Compressors	2 x Sperre PL2 /77 3.3Mpa

PERFORMANCE & CONSUMPTION	
Maximum Speed	14 Kts @ 35 mt/day (@100% MCR)
Service Speed	12 Kts @ 23 mt/day
Ecnomical Speed	10 Kts @ 18 mt/day
Anchor Handling Towing	23 mt / day
DP Operations	15 mt / day
Outport Standby	9 mt / day
Anchor in Port	0.9 mt / day

ANCHOR HANDLING TOWING EQUIPMENT	
Bollard Pull	125 tonnes - - 135 tonnes approximately
Anchor Handling Towing Winch	Double drum waterfall Brattvaag SL300/ BSL300W
Line Pull Capacity	300 tonnes @ 1st layer
Brake Holding Capacity	450 tonnes @ 1st layer
Towing Drum Capacity	Wire diameter 76mm x 2000 m length
Anchor Handling Drum	Wire diameter 76mm x 2000 m length
Storage Reel w/spare wire	Wire diameter 76mm x 2000 m length
Storage Reel w/spare wire	Pendant wires & 300m work wire dia 76mm
Rig Chain Gypsy	1 x 76mm 1 x 90mm
Chain Locker	2 x 70 m3
Towing Pins	1 x Karmoy Retractable SWL 500 tonnes
Shark Jaws / Karm Fork	1 x Karmoy Retractable SWL 500 tonnes
Stern roller	Dia 2.2m x Length 5m SWL 500 tonnes

DECK MACHINERY AND MOORING EQUIPMENT	
Tugger Winch	2 x SWL 10 tonnes Brattvaag LAKMX41015
Capstan	2 x SWL 10 tonnes Rolls Royce LC-XX41015
Deck Crane	1 x SWL 5ton @ 15m Telescopic Provision Crane
Anchor Windlass	1 x SWL 14 tonnes Brattvaag double gypsy windlass with 2 warping drum
Anchor Chain	2 x dia 46 mm x 440 m studlink anchor chain
Anchor	2 x AC14 HHP 2046Kg anchor

OWNER / MANAGER	BRIDGEWATER OFFSHORE PTE LTD KIM HENG MARINE & OILFIELD PTE LTD
	enquiry@kimheng.com.sg www.kimheng.com.sg
Telephone / Fax	(65) 6777 9990 / (65) 6778 9990

BRIDGE NAVIGATION EQUIPMENT	
S-Band Radar 10cm ARPA28	1 x Furuno FAR 2117S
X-Band Radar 3cm ARPA28	1 x Furuno FAR 2137S
Auto Pilot	Raytheon Anschutz Pilot Star D NP-2015
Magnetic Compass	Saura ME-150
GPS	Furuno GP-150
Echo Sounder	Furuno FE-700 with printer
AIS	Furuno FA-150
Navtex	Furuno NX-700
Weather Fax	Furuno FAX-408
Anemometer	2 x Young Wind Tracker
Doppler Speed Log	Furuno DS-80

DYNAMIC POSITIONING SYSTEM ABS ✠ DPS-2	
DP Control System	Converteam DP-21
Gyro Compass	3 x Raytheon Anschutz STD22
DGPS Reference System	2 x DGPS Veripos LD3-G1 Cyscan MK2
VRU	1 x TSS DMS RP30
Wind Sensor	3 x Gill Wind Observer 2

BRIDGE COMMUNICATION & MONITORING EQUIPMENT	
IMMARSAT Comm C	Furuno FELCOM 15
Marine SSB Radio system	Furuno FS2570C / HS2001
VHF DSC	2 x Furuno FM8800S
Portable VHF (GMDSS)+battery	3 set McMurdo SART S4
EPIRB 406 / 121.5 mhz	McMurdo E3
Satellite Phone	Sailor Thrane & Thrane
Portable VHF Radio	2 x ICOM GM-1500
Towing & Anchoring Handling	Rolls Royce AHT Control panel
Bulk Handling System	Unislip Bulk Handling System
CCTV surveillance system	Anchor Handling & Bridgewatch
PA System	Vingtor 250W
BNWAS System	Fitted
V-SAT Ku Band Intellian V85 with 1024/ 512 MIR 128/64 CIR	

FIRE FIGHTING CAPABILITY - ABS FIFI CLASS 1	
Main Ship Fire Pump	1 x 75m3/h @90m head
Emergency Fire Pump	1 x 35m3/h @50m head
Water / Foam Monitor	2 x 1200m3/h @160m Throw
External FiFi Pump	2 x 1500m3/h @14bar
FFS/Scanpump SPP250 x 350 HD Hydrakit system	
FOAM Capacity	21.5m3
Water Curtain Spray System	Accommodation & main deck
Fixed Fire Fighting CO2 system for machinery system	

LIFE SAVING AND STANDBY RESCUE CAPABIITY	
Fitted in Compliance with IMO SOLAS (1974) Approved	
SWL 21kN Launching & Recovery System for MOB/FRC	
Fast Rescue Craft FRC-6pax	Zodiac Inflatable Rescue Craft
RESCUE ZONE	2 Zones Scrambling Net fitted

ANTI POLLUTION CAPABILITY	
Dispersant Storage Capacity	21.5m3
Dispersant Spray Boom 6Mtr	2 Set
Emergency Anti Pollution Kit	1 set
External Oil Recovery System	Optional IMO TIER 1 Capability

ACCOMMODATION & FACILITIES	
Accommodation fitted with Airconditioning System	
25 Cabins -Total 40 Persons	10 x Single Berth 15 x Double Berth
1 x Hospital Cabin Single Berth	Ship Office, DP2 Instrument Cabin
Galley, Mess Room, Recreation Room, Gymnasium Room	
2 x JCU IVY Refrigeration fitted Cold Room , 1 x dry provision store	
Laundry Room and Workwear PPE Changeout Zone	

ENVIRONMENTAL IMO MARPOL COMPLIANCE
WCB-50 pax holding capacity Sewage Treatment Plant
15-ppm Taiko Kikai Oily Water Separator of 1m3/hr
Water Maker Sea Recovery Coral Sea 2800 Rev Osmosis 10 m3/day
Domestic Sanitary system 500Litres Hydrophore tank unit
Anti Air Pollution Engines Exhaust System
Bulk Cargo load/discharge station spill containment

Specifications given herein are believed to be correct but no guaranteed

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BRIDGEWATER 132

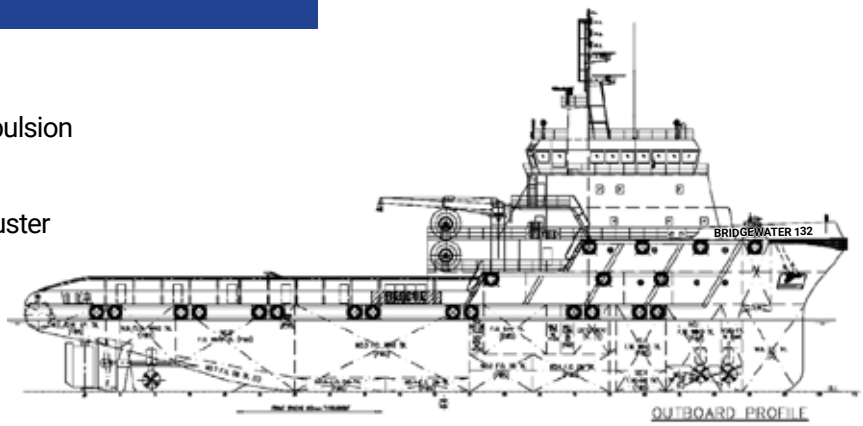
10,800BHP 70M AHTS DP2 FiFi 1



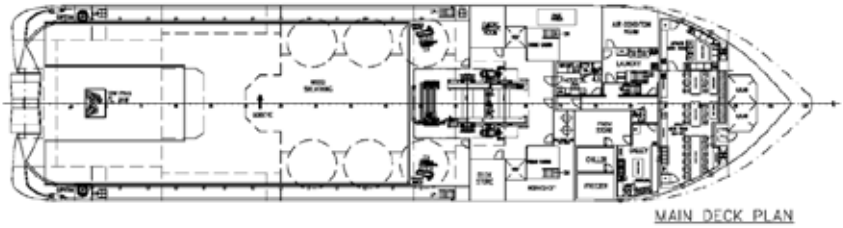
10,800BHP 130TBP DP2 FIFI 1
Anchor Handling Tug Supply
Standby Escort Rescue Tug

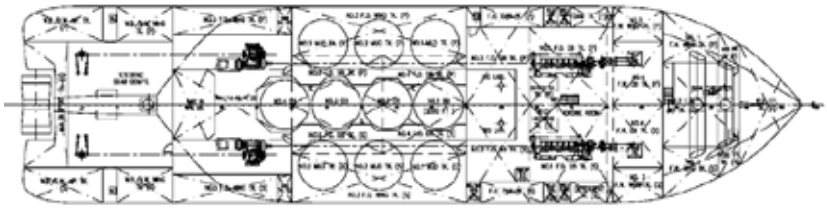
Features

- 10,800 BHP (8,000KW) Controllable Pitch Propulsion
- 120MT to 135MT Bollard Pull
- 2 x 800kw Bow Thruster & 1 x 800kw Stern Thruster
- Fuel Capacity: 1200 MT // Clear Deck : 500 M2
- Deadweight Capacity : 2180MT
- Dynamic Positioning DP-2 System
- Fire-Fighting FiFi Class 1
- CCTV Ship Security & Operations
- V-SAT Ku Band Intellian V85
- Anti Pollution Oil Spill Response
- Environmental IMO Compliance
- Accommodation Total 40 Berths
- 27 Cabins c/w Ensuite Bathroom
- 10 Single & 15 Double Cabin
- 1 Hospital Cabin
- 1 Ship Office Cabin
- Galley with Messroom for 30 persons
- Recreation & Laundry Room



OUTBOARD PROFILE


MAIN DECK PLAN


BELOW DECK PLAN

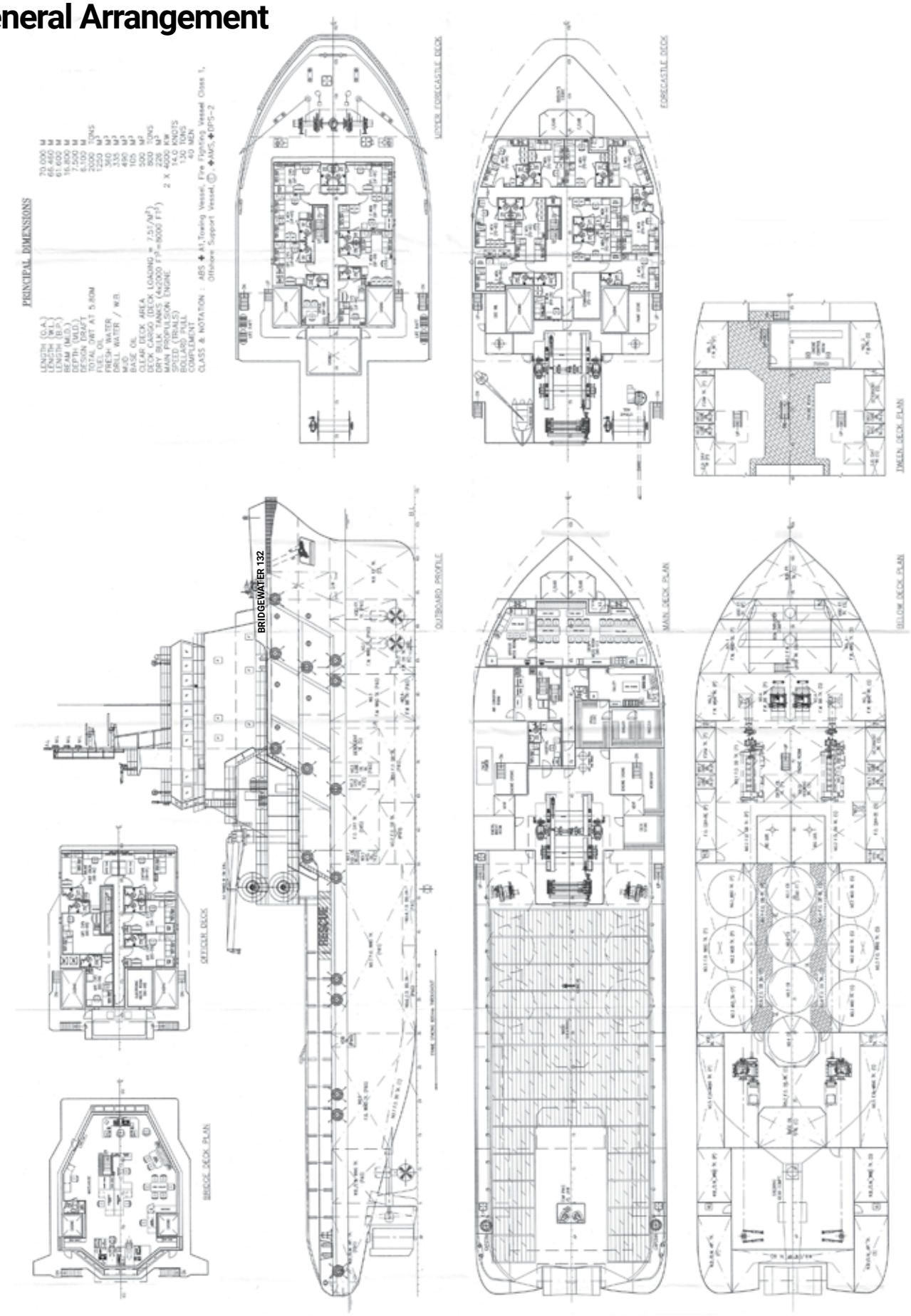
Specifications given herein are believed to be correct but no guaranteed

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BRIDGEWATER 132

10,800BHP 70M AHTS DP2 FiFi 1

General Arrangement



Specifications given herein are believed to be correct but no guaranteed

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BRIDGEWATER 132

10,800BHP 70M AHTS DP2 FiFi 1

MAIN PARTICULARS	
Vessel Name	BRIDGEWATER 132
IMO No.	9555424
Year Built	2010-02
Place Built	Fujian Southeast Shipyard-China
Port - Flag Registry	Port Kelang, Malaysia
Callsign	9MYS9
Official No.	336926
GRT / NRT	2708 / 812
Class Notation A B S	✠A1 Anchor Handling Towing Vessel FiFi Class 1 Offshore Support Vessel (E)✠AMS ✠ DPS-2 Unrestricted Navigation

DIMENSIONS	
Length - OA	70.00 M
Length - BP	64.00 M
Breadth - Moulded	16.80 M
Depth - Moulded	7.50 M
Draft - Moulded	6.10 M
Deadweight Max Capacity	2180 tonnes
Deck cargo capacity	700 tonnes
Main Cargo Deck (L x B)	33.5M X 13.5M
Deck Strength	7.5 Tonnes /M2
Deck Area	500 M2

BULK CAPACITIES		TRANSFER RATE
Fuel Oil	1221 m3	1 x 150m3/h @75m head
Fresh Water	393.5 m3	1 x 150m3/h @75m head
Ballast/Drill Water	1339.7 m3	1 x 150m3/h @75m head
Liquid Mud / Brine	490 m3	2 x 75m3/h @75m head
Base Oil	104 m3	1 x 61m3/h @90m head
Dry bulk mud / cement	226 m3	2 x 18m3/h @80psi

MACHINERY	
Main Engine Propulsion	2 x 4000kw@750rpm Wartsila 8L32 Diesel Engine CPP Propeller in Kort Nozzle Total 10800bhp
Bow Tunnel Thruster CPP	2 x 600kw(800bhp) Wartsila CT175H-D 9.5te thrust
Stern Tunnel Thruster CPP	1 x 600kw(800bhp) Wartsila CT175H-D 9.5te thrust
Auxilliary Diesel Generator	2 x 350kw Leroy 415V/3P/50Hz Caterpillar C18
Shaft Generator	2 x 1600kw 415V/3P/50Hz Marelli Motori
Emergency Generator	1 x 65kw/415V/3P/50Hz Caterpillar C4.4
Bulk Air Compressors	2 x Airman SWS125/18m3/h x 80 PSI
Service Air Compressors	2 x Sperre PL2 /77 3.3Mpa

PERFORMANCE & CONSUMPTION	
Maximum Speed	14 Kts @ 35 mt/day (@100% MCR)
Service Speed	12 Kts @ 23 mt/day
Ecnomical Speed	10 Kts @ 18 mt/day
Anchor Handling Towing	23 mt / day
DP Operations	15 mt / day
Outport Standby	9 mt / day
Anchor in Port	0.9 mt / day

ANCHOR HANDLING TOWING EQUIPMENT	
Bollard Pull	125 tonnes - - 135 tonnes approximately
Anchor Handling Towing Winch	Double drum waterfall Brattvaag SL300/ BSL300W
Line Pull Capacity	300 tonnes @ 1st layer
Brake Holding Capacity	450 tonnes @ 1st layer
Towing Drum Capacity	Wire diameter 76mm x 2000 m length
Anchor Handling Drum	Wire diameter 76mm x 2000 m length
Storage Reel w/spare wire	Wire diameter 76mm x 2000 m length
Storage Reel w/spare wire	Pendant wires & 300m work wire dia 76mm
Rig Chain Gypsy	1 x 76mm 1 x 90mm
Chain Locker	2 x 70 m3
Towing Pins	1 x Karmoy Retractable SWL 500 tonnes
Shark Jaws / Karm Fork	1 x Karmoy Retractable SWL 500 tonnes
Stern roller	Dia 2.2m x Length 5m SWL 500 tonnes

DECK MACHINERY AND MOORING EQUIPMENT	
Tugger Winch	2 x SWL 10 tonnes Brattvaag LAKMX41015
Capstan	2 x SWL 10 tonnes Rolls Royce LC-XX41015
Deck Crane	1 x SWL 5ton @ 15m Telescopic Provision Crane
Anchor Windlass	1 x SWL 14 tonnes Brattvaag double gypsy windlass with 2 warping drum
Anchor Chain	2 x dia 46 mm x 440 m studlink anchor chain
Anchor	2 x AC14 HHP 2046Kg anchor

OWNER / MANAGER	BRIDGEWATER OFFSHORE PTE LTD KIM HENG MARINE & OILFIELD PTE LTD
	enquiry@kimheng.com.sg www.kimheng.com.sg
Telephone / Fax	(65) 6777 9990 / (65) 6778 9990

BRIDGE NAVIGATION EQUIPMENT	
S-Band Radar 10cm ARPA28	1 x Furuno FAR 2117S
X-Band Radar 3cm ARPA28	1 x Furuno FAR 2137S
Auto Pilot	Raytheon Anschutz Pilot Star D NP-2015
Magnetic Compass	Saura ME-150
GPS	Furuno GP-150
Echo Sounder	Furuno FE-700 with printer
AIS	Furuno FA-150
Navtex	Furuno NX-700
Weather Fax	Furuno FAX-408
Anemometer	2 x Young Wind Tracker
Doppler Speed Log	Furuno DS-80

DYNAMIC POSITIONING SYSTEM ABS ✠ DPS-2	
DP Control System	Converteam DP-21
Gyro Compass	3 x Raytheon Anschutz STD22
DGPS Reference System	2 x DGPS Veripos LD3-G1 Cyscan MK2
VRU	1 x TSS DMS RP30
Wind Sensor	3 x Gill Wind Observer 2

BRIDGE COMMUNICATION & MONITORING EQUIPMENT	
IMMARSAT Comm C	Furuno FELCOM 15
Marine SSB Radio system	Furuno FS2570C / HS2001
VHF DSC	2 x Furuno FM8800S
Portable VHF (GMDSS)+battery	3 set McMurdo SART S4
EPIRB 406 / 121.5 mhz	McMurdo E3
Satellite Phone	Sailor Thrane & Thrane
Portable VHF Radio	2 x ICOM GM-1500
Towing & Anchoring Handling	Rolls Royce AHT Control panel
Bulk Handling System	Unislip Bulk Handling System
CCTV surveillance system	Anchor Handling & Bridgewatch
PA System	Vingtor 250W
BNWAS System	Fitted
V-SAT Ku Band Intellian V85 with 1024/ 512 MIR 128/64 CIR	

FIRE FIGHTING CAPABILITY - ABS FIFI CLASS 1	
Main Ship Fire Pump	1 x 75m3/h @90m head
Emergency Fire Pump	1 x 35m3/h @50m head
Water / Foam Monitor	2 x 1200m3/h @160m Throw
External FiFi Pump	2 x 1500m3/h @14bar
FFS/Scanpump SPP250 x 350 HD Hydrakit system	
FOAM Capacity	21.5m3
Water Curtain Spray System	Accommodation & main deck
Fixed Fire Fighting CO2 system for machinery system	

LIFE SAVING AND STANDBY RESCUE CAPABIITY	
Fitted in Compliance with IMO SOLAS (1974) Approved	
SWL 21kN Launching & Recovery System for MOB/FRC	
Fast Rescue Craft FRC-6pax	Zodiac Inflatable Rescue Craft
RESCUE ZONE	2 Zones Scrambling Net fitted

ANTI POLLUTION CAPABILITY	
Dispersant Storage Capacity	21.5m3
Dispersant Spray Boom 6Mtr	2 Set
Emergency Anti Pollution Kit	1 set
External Oil Recovery System	Optional IMO TIER 1 Capability

ACCOMMODATION & FACILITIES	
Accommodation fitted with Airconditioning System	
25 Cabins -Total 40 Persons	10 x Single Berth 15 x Double Berth
1 x Hospital Cabin Single Berth	Ship Office, DP2 Instrument Cabin
Galley, Mess Room, Recreation Room, Gymnasium Room	
2 x JCU IVY Refrigeration fitted Cold Room , 1 x dry provision store	
Laundry Room and Workwear PPE Changeout Zone	

ENVIRONMENTAL IMO MARPOL COMPLIANCE
WCB-50 pax holding capacity Sewage Treatment Plant
15-ppm Taiko Kikai Oily Water Separator of 1m3/hr
Water Maker Sea Recovery Coral Sea 2800 Rev Osmosis 10 m3/day
Domestic Sanitary system 500Litres Hydrophore tank unit
Anti Air Pollution Engines Exhaust System
Bulk Cargo load/discharge station spill containment

Specifications given herein are believed to be correct but no guaranteed

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MAZU 60

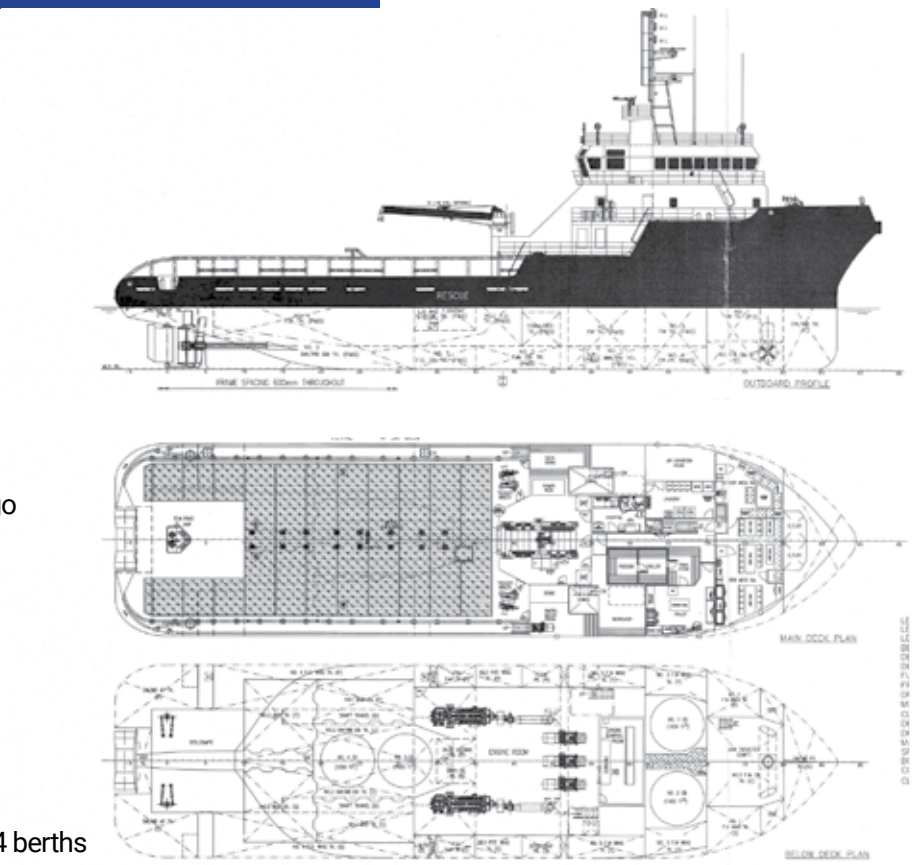
5150 BHP 59M AHTS DP1 FiFi 1



5150BHP 65TBP DP1 FiFi 1
Anchor Handling Tug Supply
Standby Escort & Rescue Tug

Features

- 5,150 BHP 65TBP BERG CPP
- 60 MT to 70 MT Estimate Bollard Pull
- 390Kw Kawasaki 6te Bow thruster
- Dynamic Positioning DPS-1
- Fire-Fighting FiFi Class 1
- Fuel Capacity 550 M3 approx.
- Potable Water 373 M3 approx.
- Cement Bulk 180 m3 approx.
- Liquid Mud 413 m3 approx.
- Clear Deck 360 M2 //500te Deck Cargo
- Deadweight Cap 1,356 MT
- CCTV Surveillance System equipped
- Anti Pollution Oil Spill Response
- V-SAT Ku Band Intellian V85
- Environmental IMO Compliance
- Accommodation for 42 Persons
- 15 Cabins w Ensuite Bathroom
- 4 x Single berth; 3 x double Berth; 8 x 4 berths
  - Hospital Cabin & Ship Office
  - Galley, Mess Room, Recreation Room
  - Laundry & PPE Change Out Zone



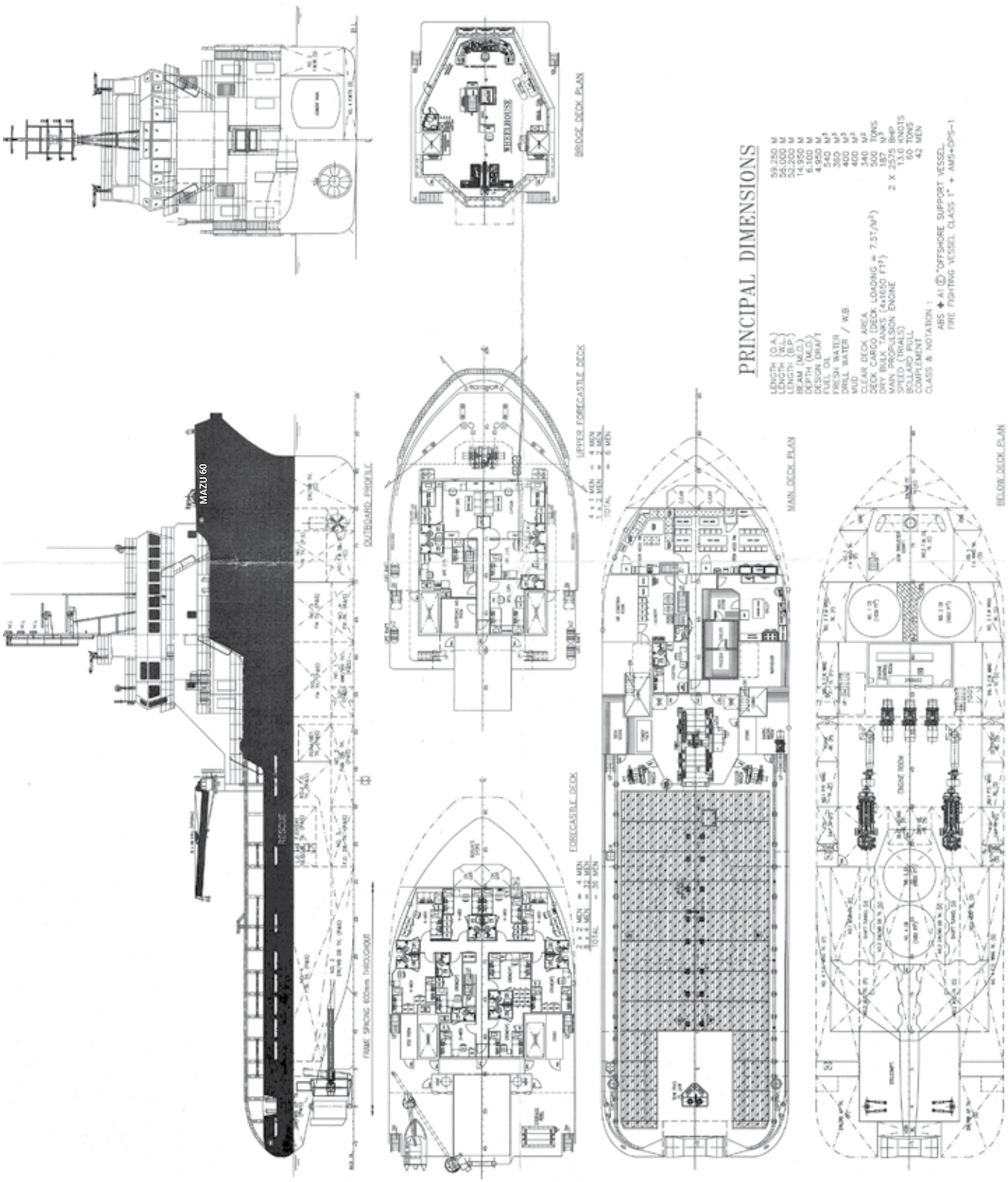
Specifications given herein are believed to be correct but no guaranteed

KIM HENG

MAZU 60

5150 BHP 60M AHTS DP1 FiFi 1

General Arrangement



Specifications given herein are believed to be correct but no guaranteed

KIM HENG

MAZU 60

5150 BHP 60M AHTS DP1 FiFi 1

MAIN PARTICULARS	
Vessel Name	MAZU 60
IMO No.	9563366
Year Built	2011-08
Place Built	CHONGQING JINLONG SHIPBUILDING -CHINA
Port - Flag Registry	PORT KELANG, MALAYSIA
Callsign / Official No	9WNC9
MMSI	563 3690000
GRT / NRT	1678 / 503
ABS Class certificate No.	11203475
Class Notation A B S	✠A1 Anchor Handling Towing Vessel FiFi Class 1 Offshore Support Vessel (E)✠AMS ✠ DPS-1 Unrestricted Navigation

DIMENSIONS		
Length - OA	59.30 M	
Length - BP	52.20 M	
Breadth - Moulded	15.0 M	
Depth - Moulded	6.10 M	
Draft - Moulded	4.95 M	
Displacement / Deadweight	2897.5 tonnes / 1356 tonnes @4.95m approx	
Deck cargo capacity	500 tonnes approx	
Main Cargo Deck (L x B)	27.5M X 12.4M	340 M2 approx
Deck Strength	7.5 Tonnes /M2	

BULK CAPACITIES		TRANSFER RATE
Fuel Oil	540 m3	1 x 150 m3/h @75m head
Potable Water	373 m3 approx	1 x 100 m3/h @75m head
Drill Water / Sea water Ballast	396.6 m3 approx	1 x 100 m3/h @75m head
Liquid Mud / Brine / Base Oil	413 m3 approx	2 x 75m3/h @75m head
Dry bulk (4 tanks x 1,650cuft)	186.9 m3	2 x 13.0 m3/h @80psi
Detergent (Oil Polution)	13 m3 approx	
Foam (Fire fighting)	13 m3 approx	
Dirty Oil Tk / Bilge Oil Tk	6.5 m3 / 6.5 m3 each	

MACHINERY	
Main Engine Propulsion	2 x 1921kw(2575BHP)@1600rpm CAT3516B-HD Engine BERG BCP690 CPP Propeller in Kort Nozzle
Bow Tunnel Thruster FPP	1 x 390kw Kawasaki KT-55B3 6.0 t thruster
Auxilliary Diesel Generator	3 x 350kw CAT C18 450V/3P/50Hz
Shaft Generator	2 x 450kw Leroy Somer LSAM471L11 440V/3P/50Hz
Emergency Generator	1 x 65 kw/450V/3P/50Hz Perkin Generator

PERFORMANCE & CONSUMPTION	
Maximum Speed	13 Kts @ 20 m3/24 hr
Service Speed	10 Kts @ 12 m3/24 hr
Ecnomical Speed	8 Kts @ 9 m3/24 hr
Anchor Handling Towing	18 m3 / day
Outport Standby	6 m3 / day
Anchor in Port	2.5 m3 / day

ANCHOR HANDLING TOWING EQUIPMENT	
Bollard Pull	60 t - 72.8 t approximately
Anchor Handling Towing Winch	Electro Hydraulic Double drum MEP-AHTW/WF-150-200
Line Pull Capacity	150 tonnes @ 1st layer
Brake Holding Capacity	200 tonnes @ 1st layer
Towing Drum Capacity	Wire diameter 56mm x 1000 m length
Anchor Handling Drum	Wire diameter 56mm x 1000 m length
Storage Reel w/spare wire	Wire diameter 56mm x 1000 m length
Storage Reel w/spare wire	Pendant wires & 300m work wire dia 56mm
Hydraulic Bollard	2 x Triplex P-150 Quick Release 150Mt
Towing Pins	1 x Karmfork Retractable SWL 160 tonnes
Shark Jaws for up to 3.1/2"	1 x Karmfork Retractable SWL 300 tonnes
Stern roller	5.0m x 1.6m diameter SWL 200 tonnes
Chain Chaser	1 x 110t J Hook / 1 x 110t 4-Prong Grapnel

DECK MACHINERY AND MOORING EQUIPMENT	
Tugger Winch	2 X SWL10t MEP-10/25 90Mx 19mm wire
Capstan	2 x SWL 5 tonnes MEP-HC-5
Deck Crane West Marine	WME-FC3090 Hydraulic crane SWL 3 tonne @9m
Anchor Windlass	1 x SWL 9t MEP double gypsy windlass with 2 warping drum
Anchor Chain	2 x dia 38 mm x 220m (17 shackle) anchor chain
Anchor	2 x AC14 HHP 1490Kg anchor

OWNER / MANAGER	BRIDGEWATER OFFSHORE PTE LTD KIM HENG MARINE & OILFIELD PTE LTD
	enquiry@kimheng.com.sg www.kimheng.com.sg
Telephone / Fax	(65) 6777 9990 / (65) 6778 9990

BRIDGE NAVIGATION EQUIPMENT	
S-Band Radar 10cm ARPA28	1 x Furuno FR 1510 MK3
X-Band Radar 3cm ARPA28	1 x Furuno FAR 2117
Auto Pilot	Raytheon Anschutz Pilotstar D
Magnetic Compass Class A	2 x Cassens & Plath Reflecta1
GPS	Furuno GP-150
Echo Sounder	Furuno FE-700
AIS	Furuno FA-150
Navtex	Furuno NX-700B
Weather Fax	Furuno FAX-408
Anemometer	1 x Raymarine ST60+
Doppler Speed Log	Furuno DS-80

DYNAMIC POSITIONING SYSTEM ABS ✠ DPS-1	
Magnetic Compass CPLATH	2 x Cassens & Plath Reflecta1
Gyro Compass	1 x Raytheon Anschutz STD-22
DGPS Reference System	1 x Furuno GP-150
Kongsberg Cjoy Joystick	fitted

BRIDGE COMMUNICATION & MONITORING EQUIPMENT	
IMMARSAT B + C Comm	Furuno +FELCOM-15
Marine SSB Radio system	Furuno FS2571C
VHF RADIO + DSC	2 x Furuno FM-8800
Portable VHF (GMDSS)+battery	3 set SART
EPIRB 406 / 121.5 mhz	McMurdo E5
GMDSS (Area 3)	Furuno RC-1500T 1 T
Portable VHF Radio	2 x YAESU ICOM GM-1500
Towing & Anchoring Handling	Rolls Royce AHT Control panel
Bulk Handling System	Fitted
CCTV surveillance system	Anchor Handling & Bridgewatch
PA System / Sound Telephone	VINGTOR ACM-M36 250W / VSP
BNWAS System	Fitted
Multi Gas Detector system	Fitted
V-SAT Ku Band Intellian V85 with 1024/ 512 MIR 128/64 CIR	

FIRE FIGHTING CAPABILITY - ABS FIFI CLASS 1	
Main Ship Fire Pump	1 x 75m3/h @90m head
Emergency Fire Pump	1 x 60m3/h @70m head
Water / Foam Monitor	2 x 1200m3/h @160m Throw
External FiFi Pump	2 x 1500m3/h @14bar
FOAM Mixer /Capacity	13m3
Water Curtain Spray System	Accommodation & main deck
Fixed Fire Fighting CO2 system for machinery system	
Fire Detection & Alarm Control	Fitted

LIFE SAVING AND STANDBY RESCUE CAPABIITY	
Fitted in Compliance with IMO SOLAS (1974) Approved	
WME-SAD14 SWL 1.35TE West Marine Single arm davit for MOB/FRC	
Fast Rescue Craft FRC	6 Pax FRP boat JY45KR OB Mercury 25 hp
RESCUE ZONE	2 Zones

ANTI POLLUTION CAPABILITY	
Dispersant Pump / Capacity	Fitted
Dispersant Spray Boom 6 Mtr	2 Set
Emergency Anti Pollution Kit	1 set

ACCOMMODATION & FACILITIES	
Accommodation for 42 Persons	4 x 1-berth, 3 x 2-berth, 8 x 4 Berth
15 Cabins w Ensuite Bathroom	Ship Office, Hospital, Meeting room
Galley, Mess Room, Recreation Room	
2 x Refrigeration fitted Cold Room , 1 x dry provision store	
Laundry Room and Workwear PPE Changeout Zone	

ENVIRONMENTAL IMO MARPOL COMPLIANCE
15-ppm Oily Water Separator FORWIN ZYFM(NJ)-1 1.0M3/HR
Sewage Treatment 1 x 50 pax Jiangsu Nanji WCB-50
RO Water Maker 1 x 5t/day Peter Taboada SW-Y 30/52
Anti Air Pollution Engines Exhaust System
Bulk Cargo load/discharge station spill containment

Specifications given herein are believed to be correct but no guaranteed

KIM HENG

BRIDGEWATER 63

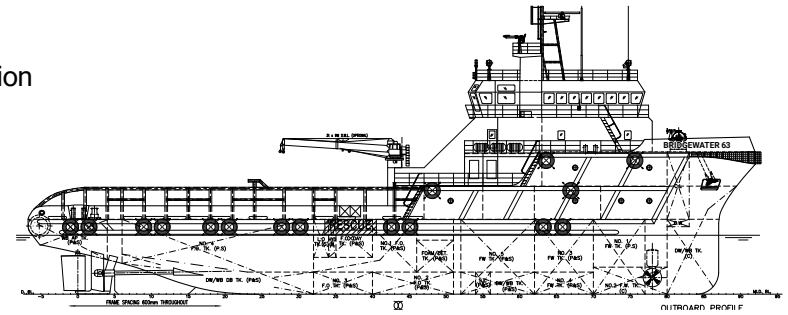
5150 BHP 60M AHTS FiFi 1

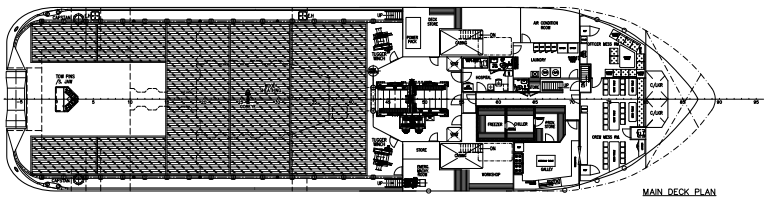


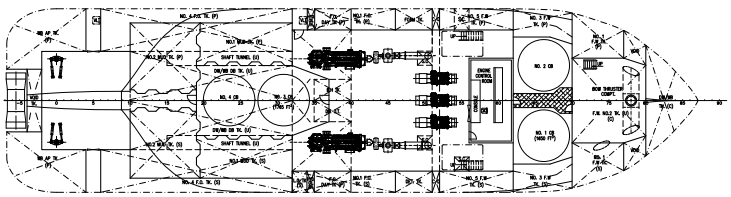
5150BHP 65TBP FiFi 1
Anchor Handling Tug Supply
Standby Escort & Rescue Tug

Features

- 5,150 BHP (3840kw) Controllable Pitch Propulsion
- 60 MT to 70 MT Estimate Bollard Pull
- 390Kw Kawasaki 6te Bow thruster
- Fuel Capacity 550 M3 approx.
- Potable Water 360 M3 approx.
- Drillwater 400M3 approx.
- Cement Bulk 187 M3 approx.
- Liquid Mud 413 m3 approx.
- Clear Deck 360 M2 / 500te Deck Cargo
- Deadweight Cap 1,360 MT
- Fire-Fighting FiFi Class 1
- Anti Pollution Oil Spill Response
- Environmental IMO Compliance
- V-SAT Ku Band Intellian V85
- CCTV Surveillance System equipped
- Accommodation for 42 Persons
- 15 Cabins w Ensuite Bathroom
- 4 x Single berth; 3 x double Berth; 8 x 4 berths
    - Hospital Cabin & Ship Office
    - Galley, Mess Room, Recreation Room
    - Laundry & PPE Change Out Zone

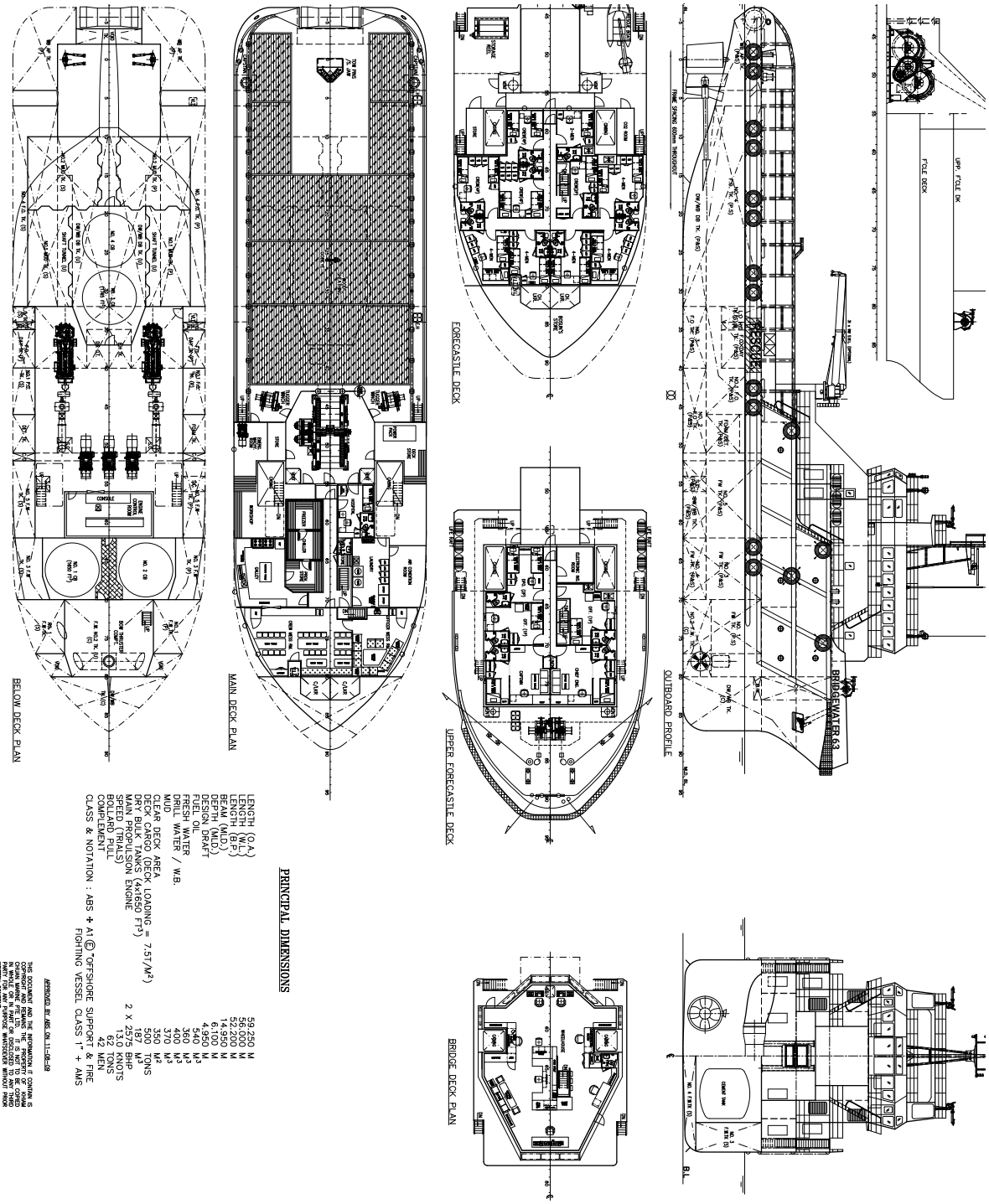






Specifications given herein are believed to be correct but no guaranteed

General Arrangement



Specifications given herein are believed to be correct but no guaranteed

KIM HENG

BRIDGEWATER 63

5150 BHP 60M AHTS FiFi 1

MAIN PARTICULARS		
Vessel Name	BRIDGEWATER 63	
IMO No.	9552240	
Year Built	2010-06	
Place Built	FUJIAN SOUTH EAST SHIPYARD, CHINA	
Port - Flag Registry	PORT KELANG, MALAYSIA	
Callsign / Official No	9WGN7 / 900066	
MMSI	533130184	
GRT / NRT	1678 / 503	
Class Notation A B S	✠A1 Anchor Handling Towing Vessel FiFi Class 1 Offshore Support Vessel (E)✠AMS Unrestricted Navigation	

DIMENSIONS		
Length - OA	59.30 M	
Length - BP	52.20 M	
Breadth - Moulded	15.0 M	
Depth - Moulded	6.10 M	
Draft - Moulded	4.95 M	
Displacement / Deadweight	2897.5 tonnes / 1356 tonnes @4.95m approx	
Deck cargo capacity	500 tonnes approx	
Main Cargo Deck (L x B)	27.5M X 12.4M	340 M2 approx
Deck Strength	7.5 Tonnes /M2	

BULK CAPACITIES		TRANSFER RATE
Fuel Oil	540 m3	1 x 150 m3/h @75m head
Potable Water	373 m3 approx	1 x 100 m3/h @75m head
Drill Water / Sea water Ballast	396.6 m3 approx	1 x 100 m3/h @75m head
Liquid Mud / Brine / Base Oil	413 m3 approx	2 x 75m3/h @75m head
Dry bulk (4 tanks x 1,650cuft)	186.9 m3	2 x 13.0 m3/h @80psi
Detergent (Oil Polution)	13 m3 approx	
Foam (Fire fighting)	13 m3 approx	
Dirty Oil Tk / Bilge Oil Tk	6.5 m3 / 6.5 m3 each	

MACHINERY	
Main Engine Propulsion	2 x 1921kw(2575BHP)@1600rpm CAT3516B-HD Engine BERG BCP690 CPP Propeller in Kort Nozzle
Bow Tunnel Thruster FPP	1 x 390kw Kawasaki KT-55B3 6.0 t thruster
Auxilliary Diesel Generator	3 x 350kw CAT C18 450V/3P/50Hz
Shaft Generator	2 x 450kw Leroy Somer LSAM471L11 440V/3P/50Hz
Emergency Generator	1 x 65 kw/450V/3P/50Hz Perkin Generator

PERFORMANCE & CONSUMPTION	
Maximum Speed	13 Kts @ 20 m3/24 hr
Service Speed	10 Kts @ 12 m3/24 hr
Ecnomical Speed	8 Kts @ 9 m3/24 hr
Anchor Handling Towing	18 m3 / day
Outport Standby	6 m3 / day
Anchor in Port	2.5 m3 / day

ANCHOR HANDLING TOWING EQUIPMENT	
Bollard Pull	60 t - 72.8 t approximately
Anchor Handling Towing Winch	Electro Hydraulic Double drum MEP-AHTW/WF-150-200
Line Pull Capacity	150 tonnes @ 1st layer
Brake Holding Capacity	200 tonnes @ 1st layer
Towing Drum Capacity	Wire diameter 56mm x 1000 m length
Anchor Handling Drum	Wire diameter 56mm x 1000 m length
Storage Reel w/spare wire	Wire diameter 56mm x 1000 m length
Storage Reel w/spare wire	Pendant wires & 300m work wire dia 56mm
Hydraulic Bollard	2 x Triplex P-150 Quick Release 150Mt
Towing Pins	1 x Karmfork Retractable SWL 160 tonnes
Shark Jaws for up to 3.1/2"	1 x Karmfork Retractable SWL 300 tonnes
Stern roller	5.0m x 1.6m diameter SWL 200 tonnes
Chain Chaser	1 x 110t J Hook / 1 x 110t 4-Prong Grapnel

DECK MACHINERY AND MOORING EQUIPMENT	
Tugger Winch	2 X SWL10t MEP-10/25 90Mx 19mm wire
Capstan	2 x SWL 5 tonnes MEP-HC-5
Deck Crane West Marine	WME-FC3090 Hydraulic crane SWL 3 tonne @9m
Anchor Windlass	1 x SWL 9t MEP double gypsy windlass with 2 warping drum
Anchor Chain	2 x dia 38 mm x 220m (17 shackle) anchor chain
Anchor	2 x AC14 HHP 1490Kg anchor

OWNER / MANAGER	BRIDGEWATER OFFSHORE PTE LTD KIM HENG MARINE & OILFIELD PTE LTD
	enquiry@kimheng.com.sg www.kimheng.com.sg
Telephone / Fax	(65) 6777 9990 / (65) 6778 9990

BRIDGE NAVIGATION EQUIPMENT	
S-Band Radar 10cm ARPA28	1 x Furuno FR 1510 MK3
X-Band Radar 3cm ARPA28	1 x Furuno FAR 2117
Auto Pilot	Raytheon Anschutz Pilotstar D
Magnetic Compass Class A	2 x Cassens & Plath Reflecta1
GPS	Furuno GP-150
Echo Sounder	Furuno FE-700
AIS	Furuno FA-150
Navtex	Furuno NX-700B
Weather Fax	Furuno FAX-408
Anemometer	1 x Raymarine ST60+
Doppler Speed Log	Furuno DS-80

BRIDGE COMMUNICATION & MONITORING EQUIPMENT	
IMMARSAT B + C Comm	Furuno +FELCOM-15
Marine SSB Radio system	Furuno FS2571C
VHF RADIO + DSC	2 x Furuno FM-8800
Portable VHF (GMDSS)+battery	3 set SART
EPIRB 406 / 121.5 mhz	McMurdo E5
GMDSS (Area 3)	Furuno RC-1500T 1 T
Portable VHF Radio	2 x YAESU ICOM GM-1500
Towing & Anchoring Handling	Rolls Royce AHT Control panel
Bulk Handling System	Fitted
CCTV surveillance system	Anchor Handling & Bridgewatch
PA System / Sound Telephone	VINGTOR ACM-M36 250W / VSP
BNWAS System	Fitted
Multi Gas Detector system	Fitted
V-SAT Ku Band Intellian V85 with 1024/ 512 MIR 128/64 CIR	

FIRE FIGHTING CAPABILITY - ABS FIFI CLASS 1	
Main Ship Fire Pump	1 x 75m3/h @90m head
Emergency Fire Pump	1 x 60m3/h @70m head
Water / Foam Monitor	2 x 1200m3/h @160m Throw
External FiFi Pump	2 x 1500m3/h @14bar
FOAM Mixer /Capacity	13m3
Water Curtain Spray System	Accommodation & main deck
Fixed Fire Fighting CO2 system for machinery system	
Fire Detection & Alarm Control	Fitted

LIFE SAVING AND STANDBY RESCUE CAPABIITY	
Fitted in Compliance with IMO SOLAS (1974) Approved	
WME-SAD14 SWL 1.35TE West Marine Single arm davit for MOB/FRC	
Fast Rescue Craft FRC	6 Pax FRP boat JY45KR OB Mercury 25 hp
RESCUE ZONE	2 Zones

ANTI POLLUTION CAPABILITY	
Dispersant Pump / Capacity	Fitted
Dispersant Spray Boom 6 Mtr	2 Set
Emergency Anti Pollution Kit	1 set

ACCOMMODATION & FACILITIES	
Accommodation for 42 Persons	4 x 1-berth, 3 x 2-berth, 8 x 4 Berth
15 Cabins w Ensuite Bathroom	Ship Office, Hospital, Meeting room
Galley, Mess Room, Recreation Room	
2 x Refrigeration fitted Cold Room , 1 x dry provision store	
Laundry Room and Workwear PPE Changeout Zone	

ENVIRONMENTAL IMO MARPOL COMPLIANCE
15-ppm Oily Water Separator FORWIN ZYFM(NJ)-1 1.0M3/HR
Sewage Treatment 1 x 50 pax Jiangsu Nanji WCB-50
RO Water Maker 1 x 5t/day Peter Taboada SW-Y 30/52
Anti Air Pollution Engines Exhaust System
Bulk Cargo load/discharge station spill containment

Specifications given herein are believed to be correct but no guaranteed

KIM HENG 3803

3880BHP 45TBP 45M UTILITY TUG

PRINCIPAL PARTICULARS

Port Of Registry	Port Kelang
Call Sign	9MFH5
Official No.	3332418
Year Built	2007
Class	Bureau Veritas
Notation	1 ✠ HULL✠ Mach Support / Supply Tug
Type	Tug Utility Vessel
Class No.	13169R
IMO No.	9448126
Hull No.	YX-3078
Flag	Malaysia
Owner	Kim Heng Marine & Oilfield Pte Ltd
Operator	Kim Heng Marine & Oilfield Pte Ltd

DIMENSION

Length Overall	45.00 m
Length Waterline	43.43 m
Length Between Perpendicular	39.40 m
Breadth Moulded	11.80 m
Depth Moulded	4.60 m
Draft Moulded	3.80 m
GRT	641 MT
NRT	192 MT
Deadweight	576 MT

PERFORMANCE

Maximum speed	12.0 Knots
Cruising speed	9.0 Knots
Type of fuel	Marine Gas Oil

CARGO CAPACITIES

Deck Cargo	100 MT
Deck Strength	5 MT/ m²
Clear Deck Area	160 m²
Fuel Oil	5 MT/ m²
Fresh Water	160 m³
Freezer/Chiller	3 m³ / 3 m³
Foam	9 m³
Detergent	9 m³

PROPULSION SYSTEM

Main Engine	2 x Caterpillar 3516B HD 1940 BHP @ 1600 rpm
Main Generator	3 x Caterpillar 3306 x 125 kw
Emergency Genset	1 x Perkins x 30 kw
Bow Thruster	1 x 5 MT (350kw)
Propulsion	2 x FPP in Kort Nozzle

DECK EQUIPMENT

Windlass :	1 x electro-hydraulic for Ø 28 mm anchor chain rated 5 MT @ 12 m/ min 1st layer
Bow Anchor :	2 x 1,020 kg High-holding type anchors
Chain :	357.5 m x 28 mm Ø, port & stbd
Capstan :	2 x 5 MT
Tugger Winch :	2 x 5 MT
Deck Crane :	1 x 1 MT SWL. Min 15 m radius

FIRE FIGHITING EQUIPMENT

External	
FiFi	Class 1/2 with water curtain all round
Fire pump	1 x 1200 m³/ hr at 14 bar
Fire monitor	2 x 600 m³/ hr at 12 bar w/remote control
Emergency Fire Pump	1 TUR – 25 m³/ hr
Internal	
Fixed System in E/R:	CO2 system in engine room
Fire Detection Sys. :	All living space and Engine Room Electrical BA Recharging Compressor 75 ltr/ min @ 200 bar



OTHERS

Rescue Zone	Port & Stbd Side
Oily Water Separator	1 x 1 m³/ hr MARPOL

TOWING EQUIPMENT

Bollard Pull :	45 MT (max)
Tow/ AH Winch :	Single Drum Waterfall Type, Ø 42 mm x 800 m
Brake Holding :	100 MT @ 1st layer
Stern Roller :	1.45 m Ø and 3.5 m length w/ SWL 200 MT

DISCHARGE RATES

Fuel Oil	1 x 50 m³/ hr @ 50 m head
Fresh Water	1 x 50 m³/ hr @ 50 m head

NAVIGATIONAL /COMMUNICATION

GMDSS	A1 + A2 + A3
SSB	1 x Furuno
Rack Console Sys	RC 1800T
GPS Navigator	1 x KodenKTN 70 A
Sart	2 x Pathfinder Pro
Inmarsat C	2 x Furuno
Satellite EPRIB	1 x Jotron 60 AIS
VHF Radio	2 x Furuno
Portable VHF Radio	3 x Samyung STV 160 GMDSS
SAT – OFI	1 x Intellian
Navtec Receiver	1 x Furuno NX-700
X-Band Radar	1 x Furuno
Echo Sounder	1 x Furuno
Gyrocompass	1 x Anschuetz
Autopilot	1 x Simrad Robertson AP45
Weather Fax	1 x Furuno FAX-408
Speed Log	1 x Furuno DS-80
Magnetic Compass	1 x Saura keiki
Joystick Automatic	Kongsberg C Joy
Identification System	1 x Koden KAT 330

ACCOMMODATIONS

Berths	2 x 1 berths = 2 1 x 2 berths = 2 4 x 4 berths = 16
Total	20
Hospital	1 x 1 berth cabin
All cabins are fully air-conditioned	

LIFE SAVING APPLIANCE

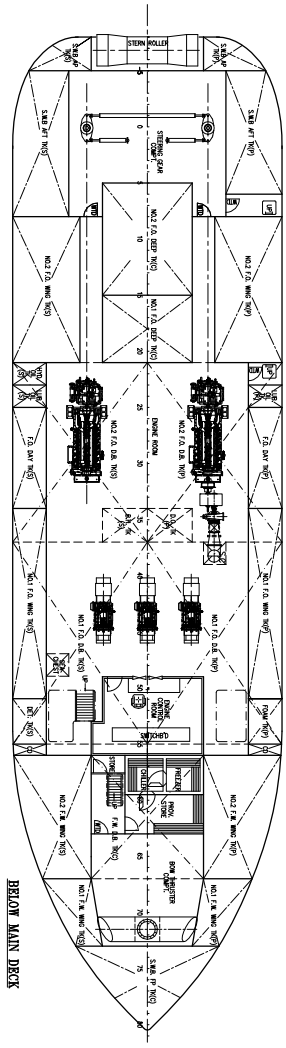
Search Lights	2 x 2000 W
Floodlights	5 x 1000 W
Liferafts	6 x 25 men
Lifebuoys	8 pcs with buoy lights
Life jackets	49 x Synthetic type
Immersion Suit	3 x Immersion Suit
Rescue boat	1 x 6 men rigid c/w 25 hp motor and david lauching
Air Breathing App.	4 x Self Contained Air Breathing apparatus
Emergency Escape Breathing Devices	6 x Emergency Escape + One (1) of training EEBD

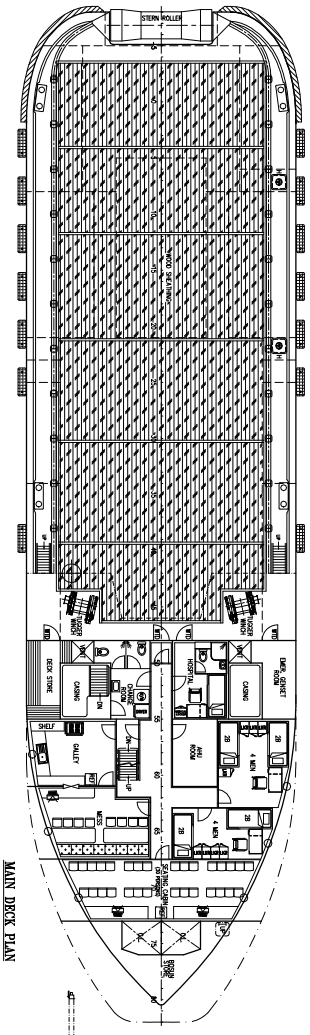
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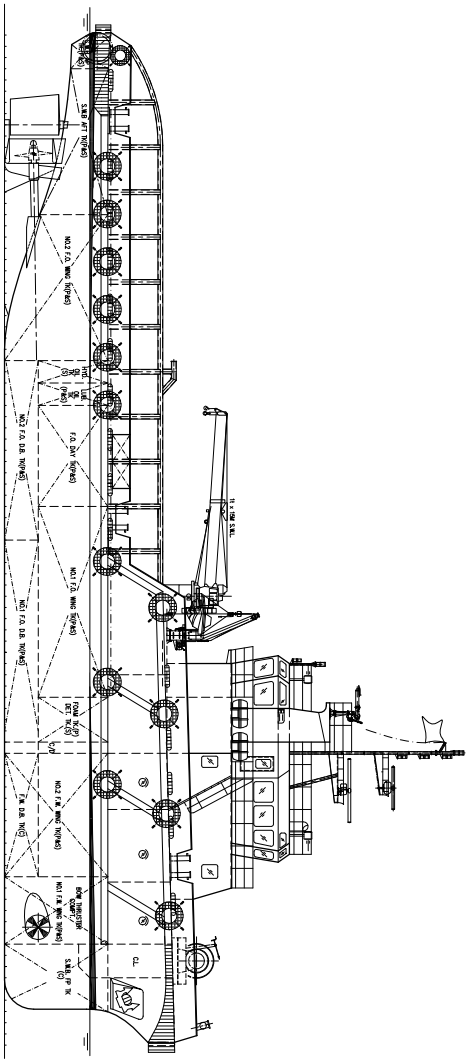
KIM HENG 3803

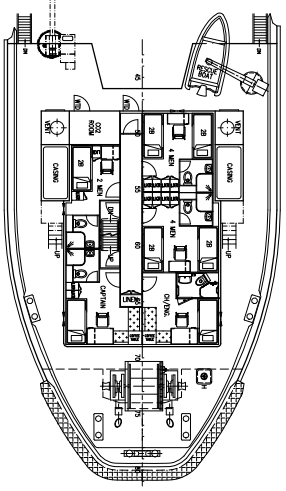
3880BHP 46TBP 45M UTILITY TUG

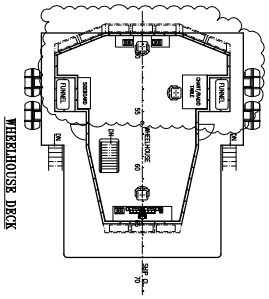
General Arrangement











REVIEWED as indicated in ABS letter

PRINCIPAL DIMENSIONS

LENGTH OVERALL	45.00 M
LENGTH WATERLINE	43.43 M
LENGTH B.P.	39.40 M
BREADTH MOULDED	11.80 M
DEPTH MOULDED	4.60 M
DRAFT (MAX.)	3.80 M
COMPLEMENT	20 MEN
FUEL OIL	550 M³
FRESH WATER	160 M³
TOTAL POWER	4000 BHP
TRIAL SPEED	12.0 KNOTS

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ITEM	DESCRIPTION OF MODIFICATION	BY	DATE
1.	ENGINE CASING AMENDED AS PER OWNER'S COMMENTS	HKJ	18-5-06
2.	AMENDED AS PER BOSS' COMMENTS	HKJ	1-6-06

CONSULTANT

KHIAM CHUAN MARINE PTE LTD
15, HILLVIEW TERRACE, SINGAPORE 669226
TEL: 67653355 FAX: 67653366
EMAIL: khiamchuan@kcm.com.sg

PROJECT: 45m MULTI-PURPOSE UTILITY VESSEL (2 x 2000 BHP)

TITLE: GENERAL ARRANGEMENT

HULL NO.	YX3078
DRAWING NUMBER	KCM/0422(C)-01
REV.	2
SCALE	1:100
DRAWN	HKJ
CHECKED	
DATE	4-11-05

Specifications given herein are believed to be correct but no guaranteed

KIM HENG



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Last Updated Date: 13/01/2025