



GENERAL DESCRIPTION

The vessel completely redesigned and converted to a Diving Offshore Support vessel.

RETROFIT- RINA class rules

The vessel also to be certified as a special purpose vessel complying the provisions of IMO resolution A.534(13) 'Code of Safety for Special Purpose Ships'

Propulsion : Diesel electric propulsion system
 Moon Pool : 4.9x4.8 sqm mtrs.
Helideck : Suitable for a 12.8 T helicopter (Puma 32).
 : Sikorsky S92, D value 21m, T value 12.8 t
 Wheel house : 2 Wheel house as per GA.Fwd Wheel House for Navigation / GMDSS main station.Aft Wheel House for DP Operation / Fire fighting / Mooring

Length Overall :95.80 mtrs.
 Length BP :89.14 mtrs.
 Depth Moulded :6.95 mtrs.
 Draft * :6.6 mtrs.
 GRT* :5308 mt
 NRT* :1707 mt
 Deadweight :1410mt
 LWL :92.28 Mtrs
 Breadth Mld :22.00 mtrs
 Displacement * :6037 MT
 SPS :199
 Crew :41

DECK CAPACITIES

Deck Strength :10 Ton / Sq mtrs
 Clear Deck Area* :850sqm mtrs
 Fuel Oil (98 %) :544.MT
 Fresh Water :506.4MT
 Ballast/Drill Water* :342.7MT
 Lub oil :20.67MT
 Dirty Oil tank :138.64 Cu mtr

PRINCIPAL PARTICULARS

Registry : Kingstown.
 Call Sign : J8B3854
 Official No. : 10327
 Year Built : 2010 RB
 Class : RINA
 Service Notation : Supply vessel, (fire fighting ship 2)*, accommodation DP3
 Additional notation : Diving Support vessel DYNAPOS AM/ AT RS
 Type : RINA C Supply vessel, fire fighting vessel
 Class No. : 85907
 IMO No. : 7816379
 Hull No. : 3763
 Flag : St Vincent & the Grenadines
 Ship builder : VEROLME HEUSDEN BV
 Ship yard : ZHOUSHAN HONGZHOU SHIPBUILDING CO. LTD, China
 Country of Economic Benefit : St Vincent & the Grenadines

PERFORMANCE

Maximum speed :10 Knots Wpx
 Economical speed :7Knots
 Average fuel consumption :In port approx 3 Cu mtr estimated
 Type of fuel :Marine Gas oil
 At Sea : 12 Mt in DP mode estimated
 At Sea Navigation : 13 Mt at Sea Speed



PROPULSION SYSTEM

Propulsion type	: OIL ENGINE(S), ELECTRIC DRIVE 2 x Voith Schneider propeller
Power	: (2 x 1000 Kw Electrical Motor, 3000V/50Hz each) 2 x 2000 Kw
PCD/ No. of Blades	: 3600 MM, 5 Blades
RPM/Pitch	: 58.2 Constant RPM / Variable Pitch
Tunnel Thruster	: 2 x Brunvoll, FU 80 LTC 1000 / 1100 Kw
Azimuth Thruster	: 2 x Brunvoll AR 63 LNC 2100 / 800 Kw
Engine	: 2 x 3 (in each Engine room) 8 M 332 AK
Manufacturer	: MAK
Model	: 8 M 332 @750 rpm
Power	: 1290 KW Total power:- 6x1290 KW
Main Alternator	: 2 x 3 in each Engine room
Manufacturer	: Heemaf
Model	: HWS – 1470 – 8
Rating	: 1200 KVA, 3000 V, 50 Hz.
Aux. alternator	: 2 x 1255 KVA, 380 V, 50 Hz , 3 Phase
Eme. Genr engine	: Cummins NTA 855 – D (M)
Power	: 240 KW.
Alternator	: Stamford 380V, 250 KVA, 50 Hz.
Alternator	: Stamford 380V, 250 KVA, 50 Hz.
Step down Transformer	: 2x2500 KVA (3KV to 380 V) , 50 Hz
Voltagages available	: 3KV, 380, 220, 110 & 24 V / 50 Hz

GMDSS/COMMUNICATION

MMSI No.	: 375765000.
Sat C Id	: 437576510
Sr. No.	: 4 TT093C8BA2F
Mini C Id	: 437576511.
SAT Telephone	: Thrane & Thrane - TT 3064 AA
Mini M	: Mini M - Fax / Phone - TT 3617 A
SVDR	: VER 4000
VHF DSC	: Sailor VHF DSC Thrane & Thrane FCC ID – TCORT 5 022 Sailor HC 4500 MF/HF Thrane & Thrane HC 4500 MF / HF Transreciever, Thrane & Thrane - HT 4520 / D 6T
Satellite EPIRB	: 2(406 ghz)
SART	: 2
VHF Radio	: 1
Portable VHF Radio	: 3
Navtex Receiver	: SNX 3
X-Band Radar	: 1
Echo Sounder	: SKIPPER- ED 165
Gyrocompass	: NAVIGAT
Weather Fax	: FX 220, Freq- 80khz, 160Khz, 2-2.4Khz
Speed Log	: NIL
Magnetic Compass	: 1
AIS	: SAMYUNG ENL SI-30
VSAT	: Sevsatim and Setvro™, Kuband, Data speed 64Kbps upward, 2 Tel lines to multimegabyte
IMMARSAT Radar	: Fugro seastar 3510 LR inmarsat : Sperry Vision 23.1 " Flat Panel Monitor

DP3 DYNAMIC POSITIONING SYSTEM

Dynamic positioning system	: KPOS 21 WITH DP11 BACKUP
CJOY	: C JOY OPERATOR TERMINAL
GYRO1	: GYROSPHERE CONTAINERMOD 10/3 GYROSPHERE TYPE 3 NAVIGATX INSTALLATION KIT : Navigat x mk1 74807/74829 Gyrosphere type 3
GYRO2	: Navigat x mk1 74807/74829 Gyrosphere type 3
GYRO3	: Navigat x mk1 74807/74829 Gyrosphere type 3
REF HIPAP	: Kit, HPR transducer control , km05
TAUT WIRE	: 2xLKTW BANDAK 350
FANBEAM	: KONSBERG Fan beam
TELESCOPIC GANGWAY	: TG SENSORRS INTEGRATED
DPC1	: Dpc1, DP Controller, 115/230V
DPC-2	: Dpc2, DP Controller, 115/230 V
DPS132	: VGA monitor cable l=10m type HD 15M-HD15 F
KPOS	: Kpos OS 650-Kmo5slim line pannel system
KPOS OS	: Kpos Os -650 slim line cop pannel system
MRU	: Mru 5E roll pitch have, yaw sensor
PRINTER	: HP LASER JET 2015n 230v CB449a# BB2
Spot beam demodulator	: Fugro Seastar 3510 LR , Spot beam Demand
UPS	: UPS power ware 3kva MK4, 230v 30min battery back up power ware 9120

DECK EQUIPMENT

Windlass	: 2 x Electro Hydraulic
Anchor Chain	: Dia 54 mm, Load – 139 Kn.
Prov Crane	: 2 x 2 MT SWL, Electro hydraulic
Deck Crane	: 2 x 100 Tons at 5 Mtrs, 15.6 M / Min 50 ton at 9 mtrs, 15 ton at 13 mtrs 10 ton at 17 mtrs, 8 ton at 21 mtrs 6 ton at 25 mtrs
Working radius	: 2.6 – 12 Mtrs.
Anchor	: 2 x 3780 Kg , Stockless
4 point Mooring Winch	: 2 x Double Drum Winches x 1200 mtrs x 38mm
Anchor	: 4xAnchors 3 Tons

TELESCOPIC GANGWAY

Maximum extended	: 42,0m
Middle position	: 34,0m
Retracted (Min.length	: 26,0m
Normal operating area	: 34,0m +/-5,5m
Prewarning area	: 34,0m +/-5,5m- +/-6,5m
Emergency area	: 34,0m +/-6,5m - +/-7,5m
Emergency Lift Off	: 34,0m +/-7,5m
Slewing Capacity	: 300 degrees
Design max. lift angle	: +20,0 degrees
Design lower angle	: - 20,0 degrees
Normal safe operation walk angle	: +/- 5 degrees



ACCOMMODATIONS

Berths	: 240 persons
Hospital	: 1 – medic – 1
One men cabin	: 1x14=14
Two men cabin	: 2x25=50
Four men cabin	: 4x44=176
Recreation room	: 2 Nos
Smoke room	: On each deck
Office	: 6
Gymnasium	: 1
Galley	: 1
Laundry room	: 2
Drier room	: 1
Meat room	: 56.54 Cu mtr (-18 deg C)
Veg room	: 84.58 cu mtr (4 deg C)
Air conditioning	
All accommodation spaces shall be air conditioned to the following requirements	
Outside temperature	: 46 deg C
Inside temperature	: 20 deg C
Humidity outside	: 80 %
Inside humidity	: 50 %

HVAC

Carrier condenser	: MHX-1608-B-2
Ref.condensing unit	: K813HB/6J-33.2Y
COOL ROOM EVAPO	: BR21
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MAIN DECK AHU	: 30-48-W1208-016-006A
D-DECK PORT	: 16-36-W1208-016-006A
D-DECK STBD	: 16-36-W1208-016-006A
C-DECK	: 20-48-W1208-016-006A
B-DECK	: 30-48-W1208-016-006A
BRIDGE DECK	: 38-58-W1206-016-006A
FCU	: APW012
FCU	: APW016
FCU	: APW020

*LIFE SAVING APPLIANCE (As per LSA)

Lifebuoys (plain)	: 4 Nos.
Life jackets with light and whistle	: 282Nos.
Rescue boat	: 6 person capacity(2 Nos.)
Makers	: Zhejiang Hengxin Ship equipment Co
Inflatable life raft (with HRU)	:25 persons capacity each (10 Nos.)
Embarkation ladder	: 4 Nos.
Life saving appliances plan	: 6 Nos
Line throwing appliances	: 4 Nos.
EPIRB (float free)	: 2 Nos.
SART radar transponder)	: 2 Nos.
2 way radio telephone apparatus	: 2 Nos.
Rocket parachute flares	: 1 set
2 way emergency communication system	: 6Nos.
Embarkation station	: 4 Nos.
Muster station (assembly station)	: 4 Nos.

*FIRE CONTROL PLAN (As per FCP)

Fire/bilge pump	: 72cu. m/hr x 65 mwc (electric motor driven)
Bilge/ballast pump	: 65 cu./hr x 65 mwc (electric motor driven)
Emergency fire pump	: 70 m cube/hr x 75 mwc (diesel eng driven)
Fire hydrants	: with 64 mm dia instaneous type of coupling
Fire hose + nozzle water	: 15 m / 64 mm dia with dual purpose nozzle 12 mm dia
International shore connection	: as per SOLAS
Emergency escape breathing Device (EEBD)	: As per FCP
Fire man's outfit	: 6 Nos.
Self containing breathing app (SCBA)	: 1 of air hose type other self contained
Fire blanket	: 2 Nos.
Fire extinguisher CO2 type	: As per FCP 1990 (eng room)
Foam installation tank	: 400 ltrs foam installation
Fuel pump's remote shut off	: 1 No.
Ventilation remote control or shut off for accommodation and services spaces	: 1 No.
Ventilation remote control or shut off for machinery room	: As per FCP
Fire damper for accommodation and services spaces	: As per FCP
Closing device for ventilation inlet or outlet for accommodation and services spaces	: As per FCP
Closing device for ventilation inlet or outlet for machinery room	: As per FCP
Fire control plan	: 6 Nos.
Emergency switchboard	: 200 KVA
Control panel for fire detection and alarm system	: 3 Nos.
Manually operated call points	: 55 Nos.
Fire bucket	: 6 Nos.
Protective equipment	: 2 Nos.
Spare charges for portable fire extinguisher	: 8 Nos.
Spare charge for EEBD	: 8 Nos.



FI- FI 2 System (optional)

FIRE MONITOR (WITH JET/SPRAY NOZZLE)

Qty	: 3 sets
Type	: Electric remote control single barrel monitor with adjustable scattering nozzle
Model	: SS300EL/F
Rated capacity	: 2400m ³ /h
Throw head	: 160m
Height	: 80m
Inlet pressure	: 1.2Mpa
Operation method	: Motor driven (380VAC 3ph 50Hz) with local manual operated
Rotation	: +175°/-175° (with limit switch)
Elevation	: -45°/+75° (with limit switch)
Protection class	: IP65
Insulation class	: F

WIRELESS REMOTE CONTROLLER

MANUFACTURE : OMNEX

Qty	: 1 set
Model	: FST716
Installation	: Monitor control cabinet
Protection class	: IP56

Function:

1. Rotation and elevation of 4 monitors
2. The change-over for jet/spray of 4 monitors
3. The change-over for water/foam of 2 monitors
4. Clutch on/off

FIRE PUMP

Qty	: 3 sets
Type	: Single stage double suction, bottom suction top discharge
Model	: XCCXB400-350-620
Capacity	: 2400 m ³ /h
Speed	: 1000 r/min
Total head	: 145m
Power	: 1100 KW

FI-FI System with Gearbox

GEARBOX

Qty	: 2 sets
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Including the following parts:

Built-in hydraulic clutch
Vertical offset shafts
Mechanical oil pump
220V AC clutch control solenoid valve for remote Control, and manual local operation

All cables on the gearbox shall be wired into a terminal box mounted on top of the gearbox
Gearbox shall be rated to handle the power requirements of the coupled pump at run-out condition

input speed	: 1800rpm
output speed 1	: 1500rpm
output speed 2	: 1800rpm
input power P	: 1170kw

MONITOR CONTROL CABINET

MANUFACTURE : NANJING SHUN SHING

Qty	: 1 set
This cabinet include wireless remote control receiver, PLC device, air switch, direct current power and other required electric components.	
Size (Length×Width×Height)	: 1000×1200×300 (Approved when)
Protection class	: IP44
Location	: Aft Wheel house:
The Schneider electric components will be used in this cabinet.	
Control panel and Electron motherboard	
Qty	: 1 set
Installation	: In the wheelhouse

Electron motherboard:

Function of control panel in the wheelhouse:

1. The action of monitors
2. Chang-over switch for water/foam
3. Three position switch for jet/curtain change-over
4. Clutch on/off and indicator
5. Open/Close switch and indicator of pump outboard discharge valve
6. Open/Close switch and indicator of proportioner seawater inlet valve
7. Open/Close switch and indicator of proportioner foam inlet valve
8. Open/Close switch and indicator of proportioner mix liquid outlet valve
9. Automatically clutch-off indicator when the engine reach 80% load
10. Alarm buzzer
11. Alarm answer button
12. Indicator light test button
13. Dimmer button
14. Chang-over switch for local/portable control
15. light indicator for by-pump and wheelhouse control

PUMP CONTROL

MANUFACTURE : NANJING SHUN SHING

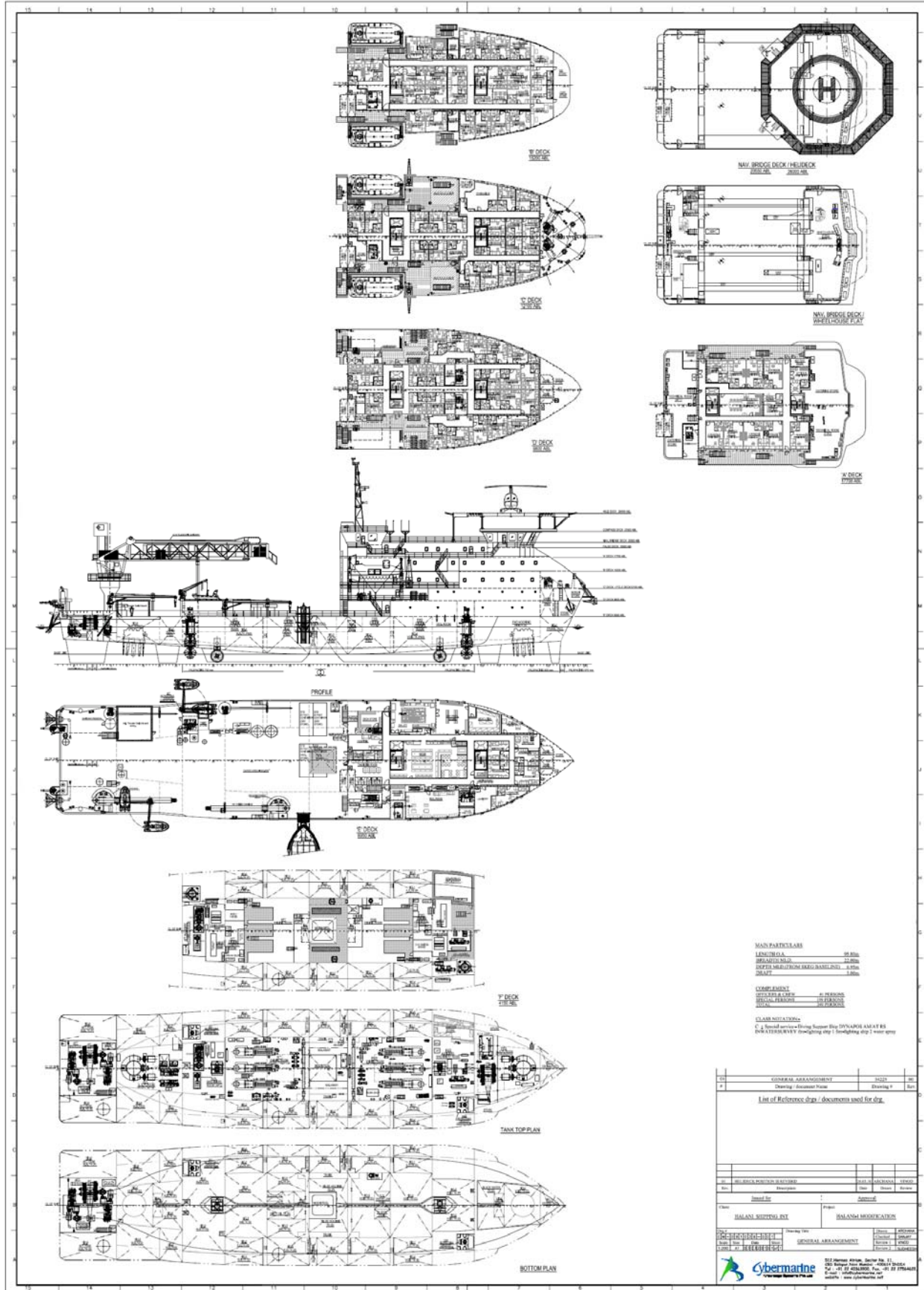
Qty	: 2 sets
Installation	: By pump
Protection class	: IP44

Starboard/larboard by pump function :

1. Clutch on switch(with light indicator)
2. Open/Close of all electric butterfly valve (inlet valve, outlet valve,by-path and outboard valve) with light indicator
3. Pump running metre
4. Change-over for local control/remote control with light indicator
5. The by-path valve and main valve have order control function after startup of pump
6. Interlock function between gearbox and seawater discharge valve
7. Open/close switch of proportioner seawater inlet valve with light indicator
8. Open/close of proportioner foam inlet valve with light indicator
9. Open/close of proportioner mix liquid outlet valve with light indicator

FIRE PUMP

Qty	: 1 sets
Type	: Single stage single suction, alax Suction top discharge
Model	: SSCXB300-250-540
Capacity	: 1000 m ³ /h
Speed	: 1450 r/min
Total head	: 70m



Particulars given are entirely without warranty as to correctness and interested parties must satisfy themselves by inspection of the vessel
 *Vessel subject to modification at Colombo, Data subject to change after inclining experiment