



1999 | DP2 CSV

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1 General Description



Multipurpose vessel for unrestricted operation offering the following contingency services:
Anchor Handling, Towing, Trenching / Ploughing, ROV Operation, Cable laying, Flexipipe laying and Installation of underwater constructions with 140T offshore crane.

Design	UT-742
Built	Ulstein Verft, Norway 1999
Classification	ICE-C AHTS SF HELDK E0 DYNPOS-AUTR LCS-SID BWM-E(s) DK(+)

2 Main Particulars and Features



2.1 Dimensions

Length overall:	95 m
Length (perpendiculars):	80,7 m
Breadth:	24 m
Depth to main deck:	9,7 m
Draught, summer	7,80 m
Freeboard, summer	1,92 m
Airdraft, Keel to top of mast	37,5mtr

2.2 Tonnage

Gross tonnage:	5913 T
Net tonnage:	1774T
Lightship displacement:	5296 T
Deadweight, summer draught	5300 T
Displacement, summer draught	11200 T

2.3 Bollard Pull

Bollard Pull:	268 T / Total BHP: 20480kW / Max Cont. RPM: 600/135 & 1800/269
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3 Power and Propulsion



3.1 Power

Main Power Plant	2 x 5280kW, Wärtsilä 8L38 2 x 3960kW, Wartsila 6L38
Main Shaft Generators	2 x 3500kW, 4375KVA, 3661Amp, 690V/60Hz/3ph, AVK DSG 114L 1-6W
Main Power Plant Monitoring	Wärtsilä IAS
Emergency Engine	1 x 400kW, Caterpillar 3408
Emergency Generator	1 x 350kW, 468KVA, 391Amp, 690V/60Hz/3ph, STAMFORD HC.M53402
Auxiliary Engine	4 x 1424kW, Caterpillar 3512B
Auxiliary Generator	4 x 1200 kW, 1500 KVA, 1255Amp, AVK DSG74L1-4
Electrical Power	690V/60Hz/3ph, 440V/60Hz/3ph, 230V/60Hz

3.2 Propulsion

Main propulsion	2 x 9240kW, Ulstein Propeller SLO480-1250/4S, Prop.diameter 4500mm, Prop.speed138RPM
Bow tunnel thrusters	2 x 1000kW, Ulstein Propeller 800TV Tunnel Thruster
Retractable azimuth thruster	1 x 2000kW, Ulstein Propeller TCNS 92/62-220 Retractable Azimuth Thruster 0-1800RPM, Freq. Controlled.
Stern thruster	2 x 1470kW, Ulstein Propeller 800TV Tunnel Thruster 1200RPM

4 Dynamic Positioning



4.1 General Information

DP Classification	DNV DYNPOS-AUTR (Class 2)
Manufacturer	Kongsberg Maritime
Type	K-Pos 21
ERN numbers	99,99,99
Capability plot	See appendix

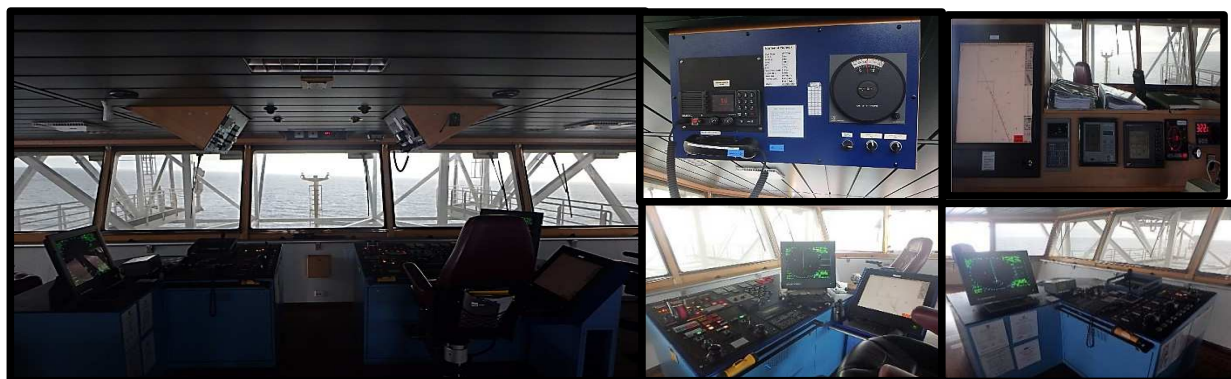
4.2 Reference systems

DGPS 1	Kongsberg Seatex Seapath 330
DGPS 2	Kongsberg Seatex DPS i2
DGPS 3	Kongsberg Seatex Seapath 300
Fanbeam	Fanbeam MKIII
HiPAP	Kongsberg HiPAP 502
Radius	Kongsberg Radius 1000

4.3 Sensors

Gyro 1	Anschutz STD22 NX
Gyro 2	Simrad GC-80
Gyro 3	Simrad GC-80
Wind Sensors	2 x GILL Wind sensor.
VRS	3 x Kongsberg Seatex MRU-5 + 1 x MRU-H.2

5 Bridge equipment



5.1 Navigation

Navigational GPS	Furuno GP-150
10 cm Radar	Furuno FR 2837 S-Band
3 cm Radar	Furuno FR 2117 X-Band
ECDIS	2 x TECDIS
Navigational Echo Sounder	Simrad EQ55
Gyro Compass	2 X Simrad GC-80; 1 x Anschütz STD22 NX
Speed Log	Ben Marine Anthea
Autopilot	Robertson AP3 MK3
AIS	Furuno FA-170
Voyage Data Recorder (VDR)	Furuno VR-3016
Magnetic Compass	Raytheon Anschütz

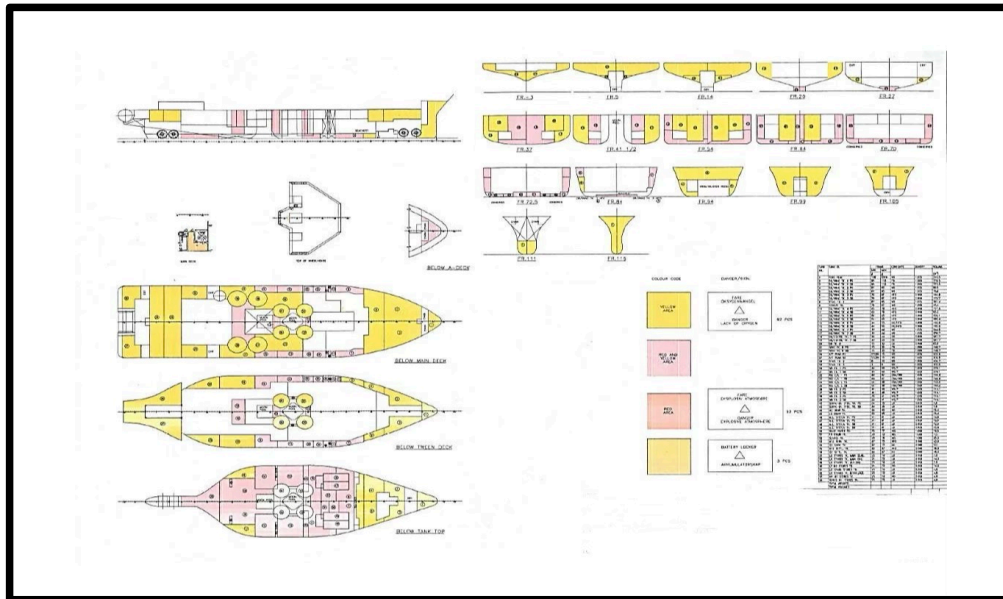
5.2 Communication

GMDSS Equipment	Sailor GMDSS
Inmarsat C	1 x Furuno FELCOM 15
Radio Telex	2 x Radio Telex Sailor 6018
VSAT Communication	Marlink iDirect
MF/HF	2 x Sailor MF/HF 6301
VHF: Fixed	Sailor RT5022
VHF: Portable (Marine)	Jotron TR20
Internal communication	Motorola UHF
VHF Direction Finder	Taiyo TD-L1520

5.3 Operation

Passive roll-damping tank	Passive stabilizing system
CCTV	Yes, only Live Feed. No recording and storage
Clear-com	Prepared for Bridge
Independent Joystick System	Rolls-Royce Poscon JS

6 Capabilities



6.1 Freshwater Capacity and Production

Capacity	1050 m ³
Evaporators	2 x 12,5 m ³ /24h Alfa-Laval, JWP-26-C80/100
Reverse Osmosis	1 x 25 m ³ /24h ENWA, MT 25T SRH

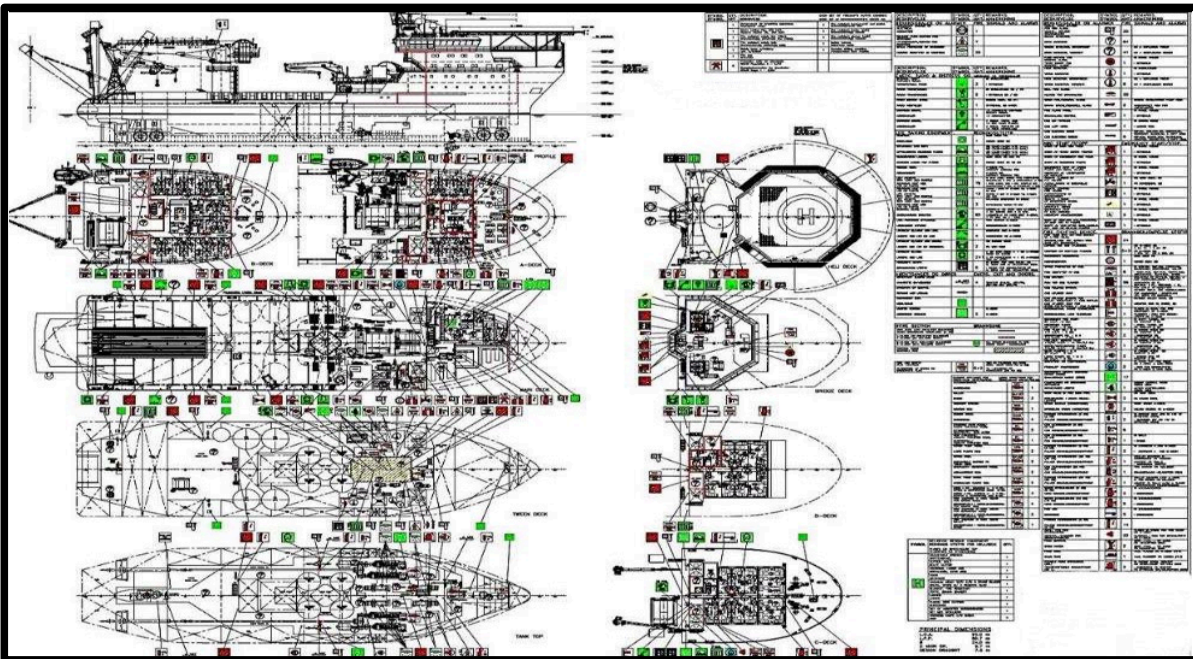
6.2 Ballast Capacity and Pumps

Capacity	3950 m ³
Ballast transfer pumps	2 x 310 m ³ /h, 2,5 bar

6.3 Waste Management

Incinerator	500.000 kcal/h (580kW) Teamtec OGS400C
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7 Safety Equipment



fully compliant with SOLAS and flag state requirements for safety equipment and is certified for a total of 79 persons on board.

Life Rafts	12 (10 x Viking 25DK+S30 & 2 x Viking 10DK+S30)
MOB Boat	1 x Norsafe 7.5m Magnum, 230 hp, 10 persons
Immersion Suits	88 (79 x Sea Arctic & 9 x Viking)
Life Jackets	94 x Regatta including 3 inflatable
Emergency Escape Breathing Devices	60 x Ocenco M-20.2/SR 77-2 Smoke/Chem Escape Hood
Emergency radios	3 x Jotron TR-20
EPIRB	1 x Jotron Tron 60AIS
EPIRB (free float)	1 x Jotron Tron 60AIS
Radar Transponders	2 x Jotron TronSART
Fire Detection System	Fire alarm central MBS-802
Fire Pumps	2 x 110 m ³ /h, 6 bar
Emergency Fire Pump	1 x 50 m ³ /h, 6 bar
CO2 protected area	In Engine room, Emergency generator room, Separator room & Galley exhaust ducts
Fixed Water Mist System	In Engine Room above all Main Engines, Auxiliary Engines, Incinerator & FO Separator Units.
Firemen's outfits	6 x Complete Outfits
Foam System	Helideck & foam tank located at B-Deck
Hospital	Hospital with treatment, stretcher, medicines, intercom, and direct ship to shore communication.

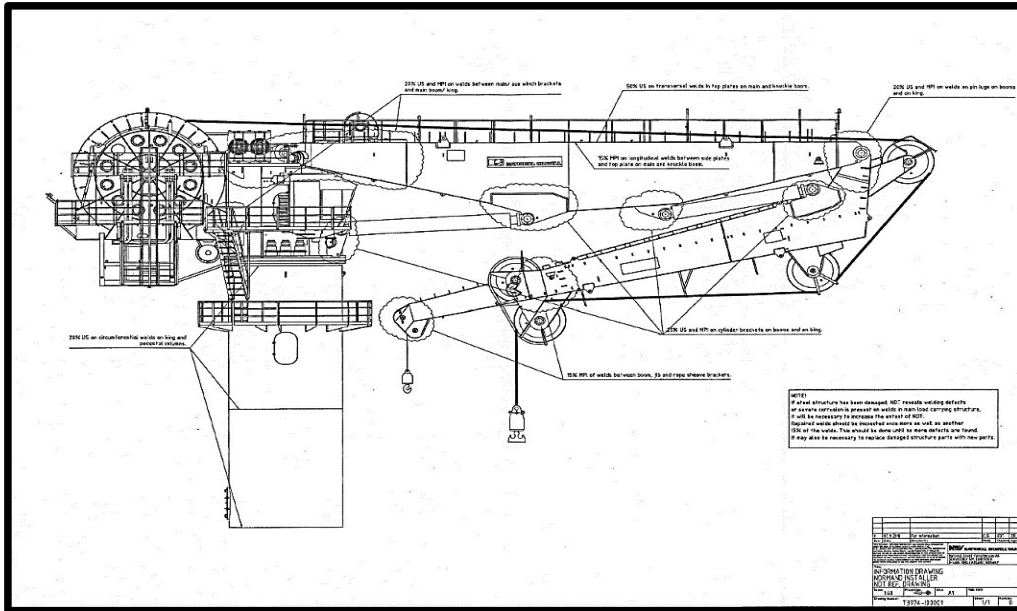
9 Deck and Equipment



9.1 Main deck

Length	50.5 m
Breadth	20.97 m
Deck Space	1059 m ²
Usable Deck Space	1000 m ²
Deck Strength	10t/m ²
Overall deck load capacity	3700T 1m above main deck, 3100T 3m above main deck
Moon-pool	2 Moon-pool 1x (4,2m x 4,2m), 1x (4,6m x 4,6m) Removable hatch.
Height of cargo rail	3m
Removable cargo rail sections	Port 1:578cm, 2:455cm, 3:545cm, 4: 400cm Stbd. 5.765m
Offshore Crane	1 x National Oilwell Varco
Deck Cranes	2 x Hydralift Electro-Hydraulic Articulate Deck Crane 1 x Palfinger Marine
Tugger Winches	2 x 15T, Hydraulic A2215U
Capstans	2 x 15T, Hydraulic CM6300
Hatches	2 x hatches (deck workshop & engine workshop)
Air supply	5 x on main deck 150m ³ /h at max 10bar
Power supply	Trafo No.7: 690V/450V/60Hz/3ph, 1000KVA Output: 450V/60Hz/3ph, 1283Amp Trafo No.8 690V/450V/60Hz/3ph, 1000KVA Output: 450V/60Hz/3ph, 1283Amp Trafo No.9 690V/240V/60Hz/3ph, 50KVA Output: 240V/60Hz/3ph, 120Amp

9.2 National Oilwell Varco Offshore Crane

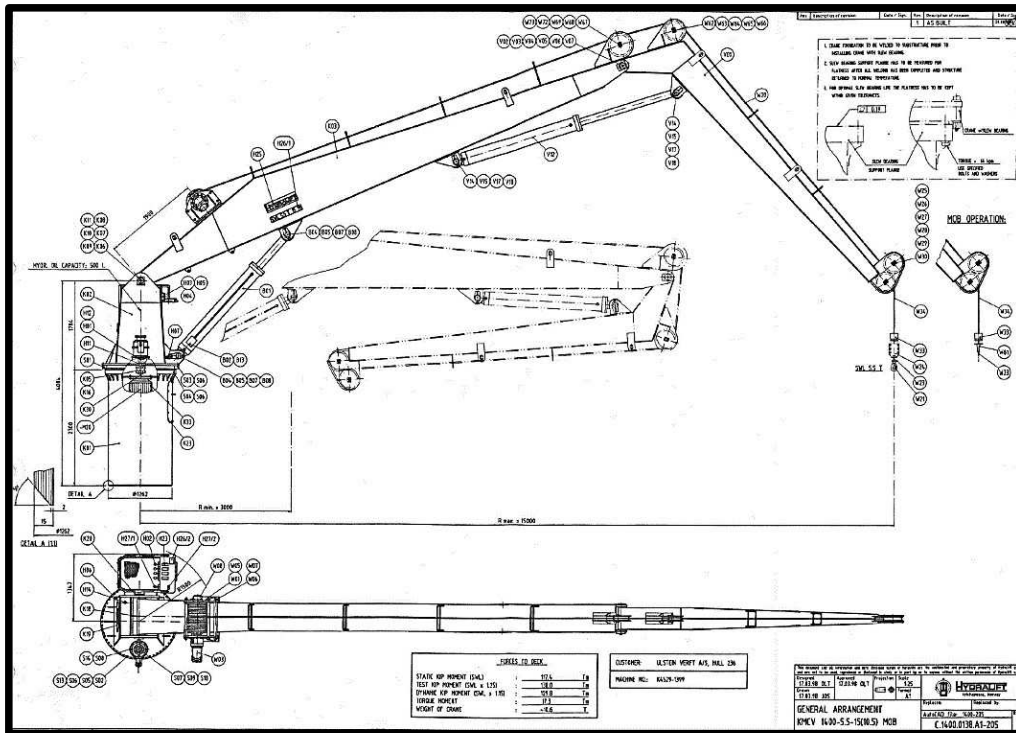


The crane is a knuckle boom equipped with an active heave compensation system (AHC) and is specially designed for load handling from a vessel towards seabed, underwater installation, or other fixed targets.

The AHC system consists of a main winch, an accumulator cylinder (AC), air pressure vessels (APV's containing nitrogen) and a crane control system for different lifting modes and transitions between modes.

Make	National Oilwell Varco
Type	OC3432K3CE
SWL	Main: 140T @ 12.5m, 40T @ 29,5m. Aux: 20T @ 31,8m
Wire Capacity	2495 m
Wire diameter x length	32mm x 599m, 70mm x 2109m
Min / max radius main	7,6 m / 29,5 m
Min / max radius aux	7,5 m / 31,8 m
Main winch wire	70 mm, 2109 meter (Total Length)
Aux winch wire	32 mm, 456 meter (Total Length)
Slew range	360° unlimited

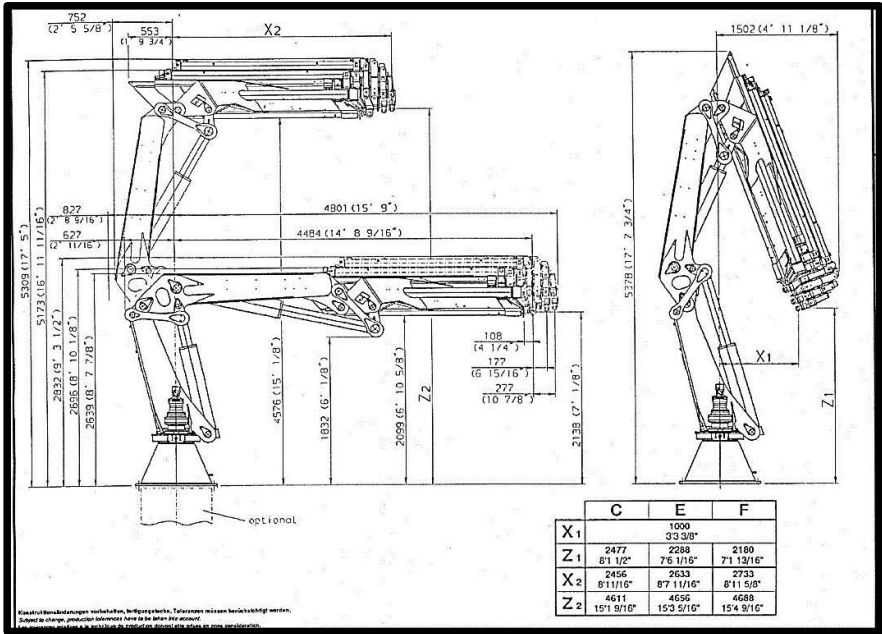
9.3 Hydralift Deck Crane



These cranes are of knuckle boom design and used as general deck cranes.

Make	Hydralift	
Type	Port, KMCV 1301-1-5-12	Stbd, KMCV 1400-5-5-15
Wire	Port, 18mm x 80m	Stbd, 18mm x 80m

9.4 Palfinger



Make	Palfinger Marine
Type	PK 32000 MES 2.5
SWL	1.3Tx16.7m
Winch	2.2T
Wire diameter x length	13mm x 45m

9.5 Towing / Anchor handling Winches

Type	Ulstein Brattvaag Towing / Anchor handling water fall BSL 500 WX / 2 SL 400 WX	
One Special handling drum. (with socket compartment)		
Length of drum	3400mm	
Length of socket compartment.	900mm	
Inner drum diameter	2800mm	
Diameter of flanges	4050mm	
Wire capacity	76mm x 3990m	100mm x 2033m
	80mm x 3349m	110mm x 1923m
	85mm x 3115m	120mm x 1692m
	90mm x 2568m	130mm x 1294m
	95mm x 2478m	140mm x 1199m
Drive Hoist		
First layer	500T at 0 – 11m/min 165T at 0 – 34m/min	
Top layer	390T at 0 – 14.5m/min 135T at 0 – 43m/min	
Dynamic Braking		
First layer	155 – 650T at 0 – 24m/min 0 – 220T at 0 – 74m/min	
Lower First layer	0 – 34m/min	
Top Layer	0 – 43m/min	
Brake holding load		
First layer	650T	
Top layer	520T	
Cable lifters for	76, 81, 86, 95, 123 and 137mm chain	
Drive hoist with 86mm gypsy	370T at 0 – 14m/min	
Two usual handling / towing drums		
Length of drum	1600mm	
Inner drum diameter	1300mm	
Diameter of flanges	3600mm	
Wire capacity	76mm x 2460m	90mm x 1790m
	80mm x 2120m	100mm x 1350m
	85mm x 2050m	110mm x 1120m

Drive Hoist	
First layer	400T at 0 – 14m/min 200T at 0 – 37m/min
Top layer	170T at 0 – 32m/min
	65T at 0 – 68m/min
Dynamic Braking	
First layer	120 – 500T at 0 – 30m/min 45- 190T at 0 – 80m/min
Brake holding load	
First layer	550T
One secondary winch: (with socket compartment)	
Length of drum	4500mm
Length of socket compartment	900mm
Inner drum diameter	1500mm
Diameter of flanges	3800mm
63T pull at 0 – 21m/min	
80T dynamic braking	
Wire capacity	76mm x 6500m
	90mm x 4300m
	165mm x 1400m

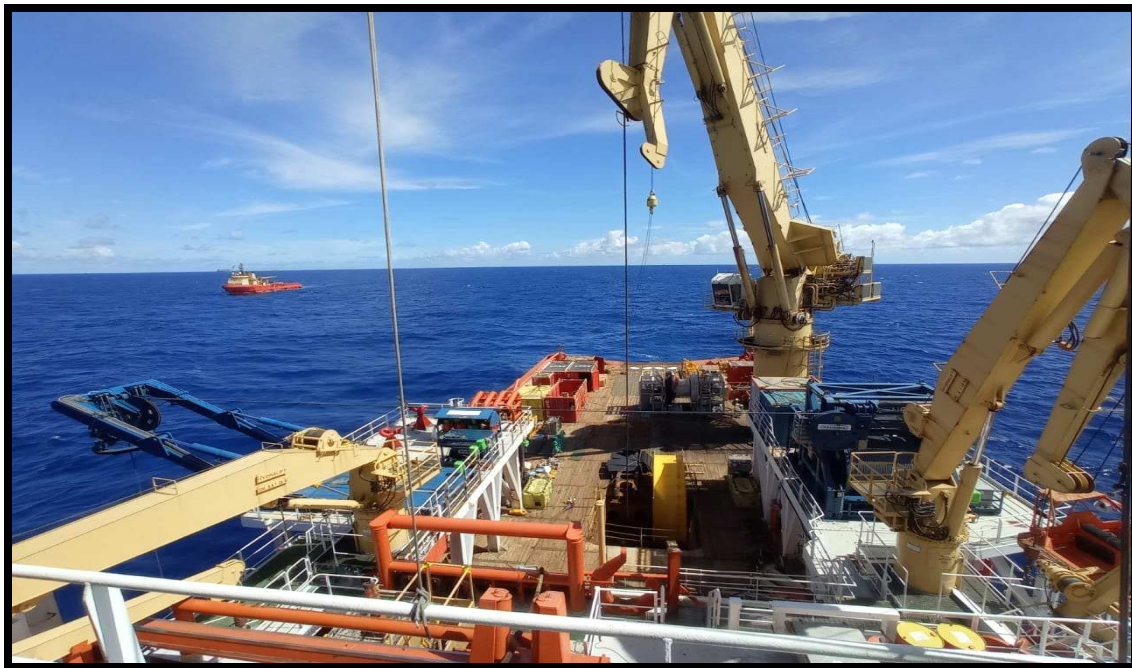
9.6 Rig Chain Lockers

4 x 137 m3 Rig chain lockers.		
Chain Capacity	Studded Chain	Stud less Chain
76mm	8179m	8800m
81mm	7718m	7942m
86mm	6850m	7116m
95mm	5480m	5708m
110mm	4152m	4281m
120mm	3425m	3605m

9.7 Anchor Handling Equipment

Shark jaw	2 x Giant jaws for handling of chain/wire up to 165mm, SWL 750T
Towing pins	4 x towing pins
Operated from bridge and locally	
Lifting pins	2 x 10T
Smit bracket	Installed on Forecastle deck MBL 450T
Stern roller	Diameter 4000mm, Breadth 7000mm, SWL 500T
Towing bracket	Smit Bracket on Forecastle deck MBL 450T

10 ROV Facilities



The vessel is equipped with mezzanine deck for the ROV A-Frame and winch, extra space on C-deck for placement of ROV container vans for workshop and control room.

11 Accommodation

11.1 Accommodation



A modern and comfortable accommodation. The accommodation includes a mess room, 2 dayrooms, 1 smoker’s dayroom, and a gymnasium.

Capacity	79 persons
Mess room	1
Dirty Mess	1
Galley	1
Laundry rooms	2
Dayrooms	3 (2 non-smoke, 1 smoke)
Gymnasium	1
Conference rooms	1
Ship office	1
Client office	1
Helideck reception room	1

11.2 Cabins



Cabin accommodation	79 persons
Single cabins	9 with WC & Shower
Double cabins	33 with WC & Shower
4-man cabins	1 with external WC

11.3 Gymnasium

