

VESSEL INFORMATION HANDBOOK



NORMAND PACIFIC

YARD NO. 167 – BERGEN GROUP, FOSEN

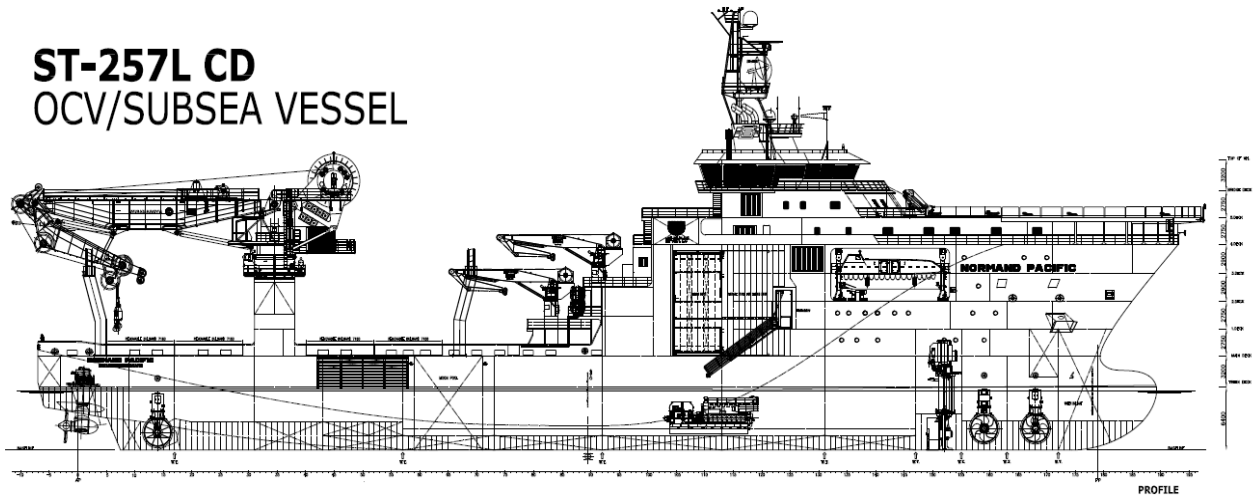
Rev.	Date	Text.	Revised by	Checked by.
00	27.05.2016	First Issue	Glenn Eirik Hansen	
01	22.08.2021	Revision	Glenn Eirik Hansen / Chief Officer	Kjetil Overå Rovik / Operations Officer
02	15.03.2022	Chang the structure, headings and deleted, vessel manager and fuel	Mari Hwa/Practician at the office	
03	18.03.2022	Updated appendices + A-frame text	Tor Gunnar Standal, C/O	

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ST-257L CD
OCV/SUBSEA VESSEL



1 General information



The Normand Pacific is an advanced DP3 subsea construction vessel equipped with a 200 ton active heave compensated subsea crane, capable of delivering loads to depths up to 2000 meters. She's a stable, versatile and cost effective working platform for a broad range of demanding offshore projects, including pipe and cable laying, subsea construction and surveying.

Name	Normand Pacific
Design	ST-257L CD
Built	Bergen Group Fosen, yard no. 167
IMO Registration	9491977
Call Sign	LAXI7
MMSI Number	257743000
DNV Identification Number	29521
Flag State	Norway (NIS)
Port of Registration	Skudeneshavn, Norway
Classification	DNV +1A1 E0, DYNPOS-AUTRO, Clean Design Comf C(3)-V(3), ICE-C, HELDK-SH, DK(+), NAUT-OSV
Owner	Solstad Rederi AS
Manager	Solstad Shipping AS Nesavegen 39, 4297 Skudeneshavn Telephone: +47 52 85 65 00 Emergency phone: +47 99 25 65 12

2 Main Particulars



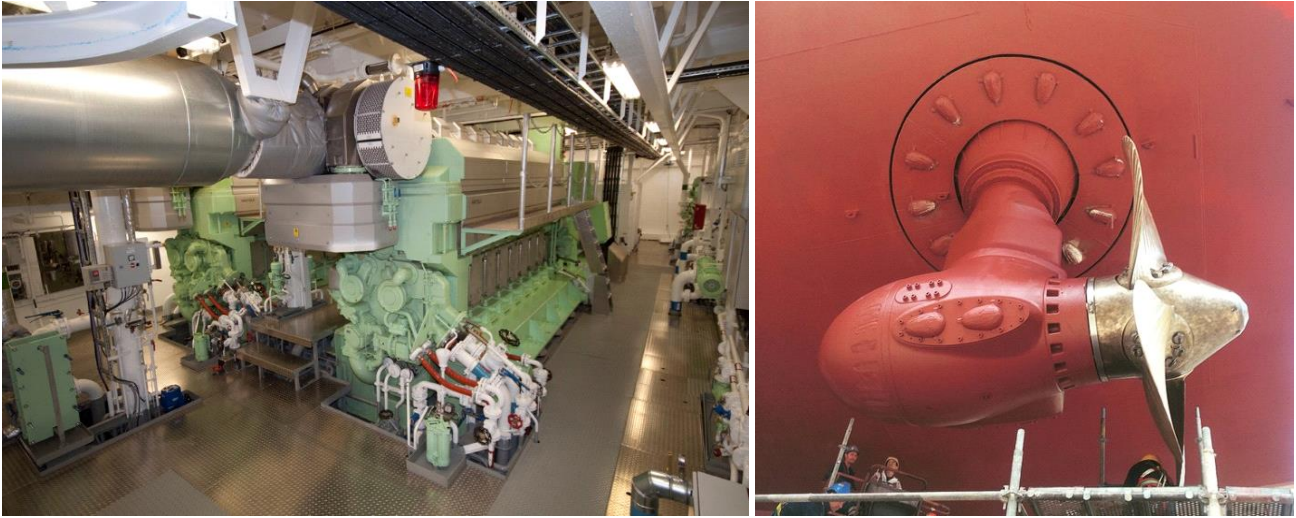
2.1 Dimensions

Length overall:	122.40 m
Length (perpendiculars):	107.40 m
Breadth:	23.00 m
Depth to main deck:	9.600 m
Draught, summer	7.300 m
Freeboard, summer	2.300 m

2.2 Tonnage

Gross tonnage:	9778 T
Net tonnage:	2934 T
Lightship displacement:	6642.19 T
Deadweight, summer draught	6719.10 T
Displacement, summer draught	13361.29 T

3 Power and Propulsion



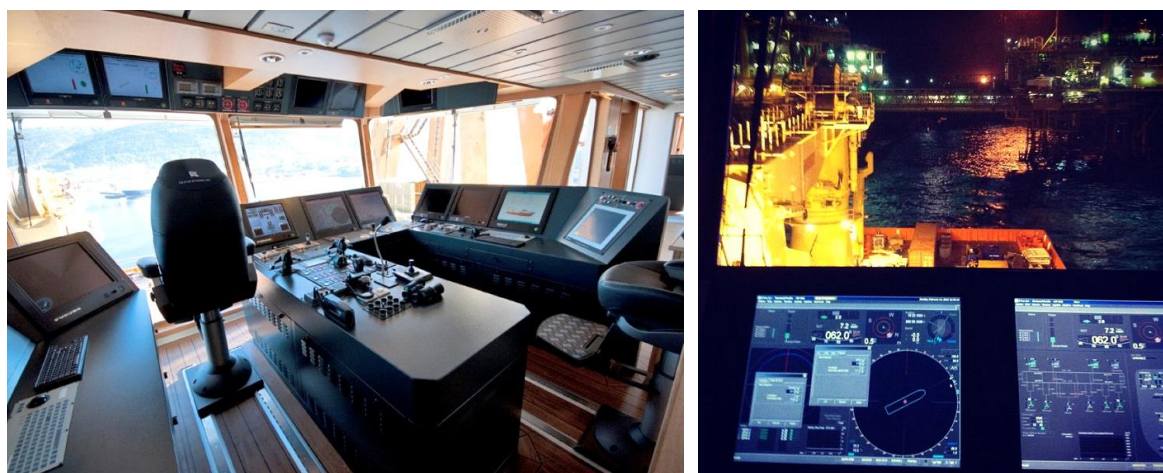
3.1 Power

Main Power Plant	4 x Wärtsilä 8L32, 3840 kW
Main Generators	4 x Alconza NIR-7195 A-10QLW, 4100 kVA, Cos ϕ 0,9.
Main Power Plant Monitoring	Wärtsilä IAS
Emergency Generator	Caterpillar 3412TA, 550 kW, 688 kVA
Harbour Generator	Caterpillar 3412TA, 550 kW, 688 kVA
Electrical Power	690V 60 Hz 3ph, 440V 60 Hz 3ph, 230V 60 Hz

3.2 Propulsion

Propulsion	Diesel electric
Main propulsion	2 x Schottel Azimuth Thrusters (3200 kW) SCR 3030 CP
Bow tunnel thrusters	2 x Brunvoll Tunnel Thruster (2 x 2000 kW) FU100LTC2750
Retractable azimuth thruster	1 x Brunvoll Retractable Azimuth Thruster (2200 kW) AR100LNC2600
Stern thruster	1 x Brunvoll Tunnel Thruster (2000 kW) FU100LTC2750
Emergency Generator	Caterpillar 3412TA, 550 kW, 688 kVA
Harbour Generator	Caterpillar 3412TA, 550 kW, 688 kVA
Electrical Power	690V 60 Hz 3ph, 440V 60 Hz 3ph, 230V 60 Hz

4 Dynamic Positioning



4.1 General Information

DP Classification	DNV DYNPOS-AUTRO (Class 3)
Manufacturer	Kongsberg Maritime
Type	K-Pos DP-21 and DP-11
ERN numbers	99,99,99
Capability plot	Available upon request

4.2 Independent joystick system

Independent joystick system	Kongsberg c-Joy
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4.3 Reference systems

DGPS 1	Kongsberg Seatex DPS 232
DGPS 2	Kongsberg Seatex DPS i2
DGPS 3	Kongsberg Seatex DPS i4
DGPS 4	Kongsberg Seatex Seapath 200
RADius	Kongsberg RADius 1000, dual interrogators
SpotTrack	Kongsberg SpotTrack, laser based reference
HiPAP	2 x Kongsberg HiPAP 500
Tautwire	Bandak Light Weight Tautwire Mk 15

4.4 Sensors

Gyro	3 x Sperry Marine Navigat X Mk 1
Wind Sensors	3 x Gill Ultrasonic Windobserver II
VRS	3 x Kongsberg Seatex MRU-5 + 1 x MRU-2

5 Bridge equipment



5.1 Navigation

Navigational GPS	2 x Furuno GP-150
10 cm Radar	Furuno FAR 2837 S
3 cm Radar	Furuno FAR 2827 (ECDIS approved chart radar)
ECDIS	Furuno / Telko TECDIS
Navigational GPS	2 x Furuno GP-150
Navigational Echo Sounder	Furuno FE-700
Gyro Compass	3 x Sperry Navigat X MK 1
Speed Log	Furuno DS-80
Autopilot	Anschütz Pilotstar D
AIS	Furuno FA-150
Voyage Data Recorder (VDR)	Furuno VR-3010

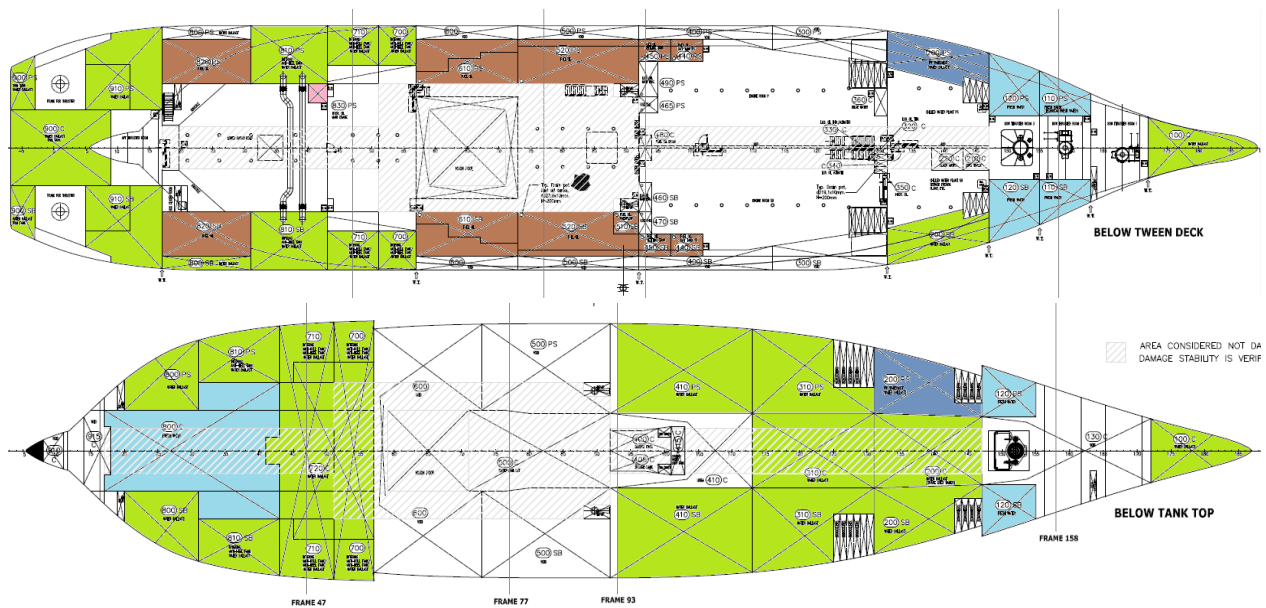
5.2 Communication

GMDSS Equipment	Furuno and Thrane & Thrane (Sailor)
Inmarsat C	2 x Furuno FELCOM 15
VSAT Communication	Marlink iDirect
MF/HF	Furuno FS-2570
VHF: Fixed	Furuno FM7700 / Thrane & Thrane Sailor RT2048
VHF: Portable (Marine)	Entel HT644
Internal communication	Motorola UHF
GMDSS Equipment	Sailor (Thrane & Thrane)
Inmarsat C	2 x Furuno FELCOM 15

5.3 Operation

Anti-heeling system	Intering system delivered by Rolls Royce
Passive roll-damping tank	Yes
CCTV	Yes
Clear-com	Prepared for Bridge, Online Room, Offline Room, Crane

6 Capacities



6.1 Freshwater Capacity and Production

Capacity	777 m ³
Evaporators	2 x 25 t / day Alfa-Laval, AQUA-100-HW
Reverse Osmosis	1 x 15 t / day ENWA, MT 20T SRH 24V

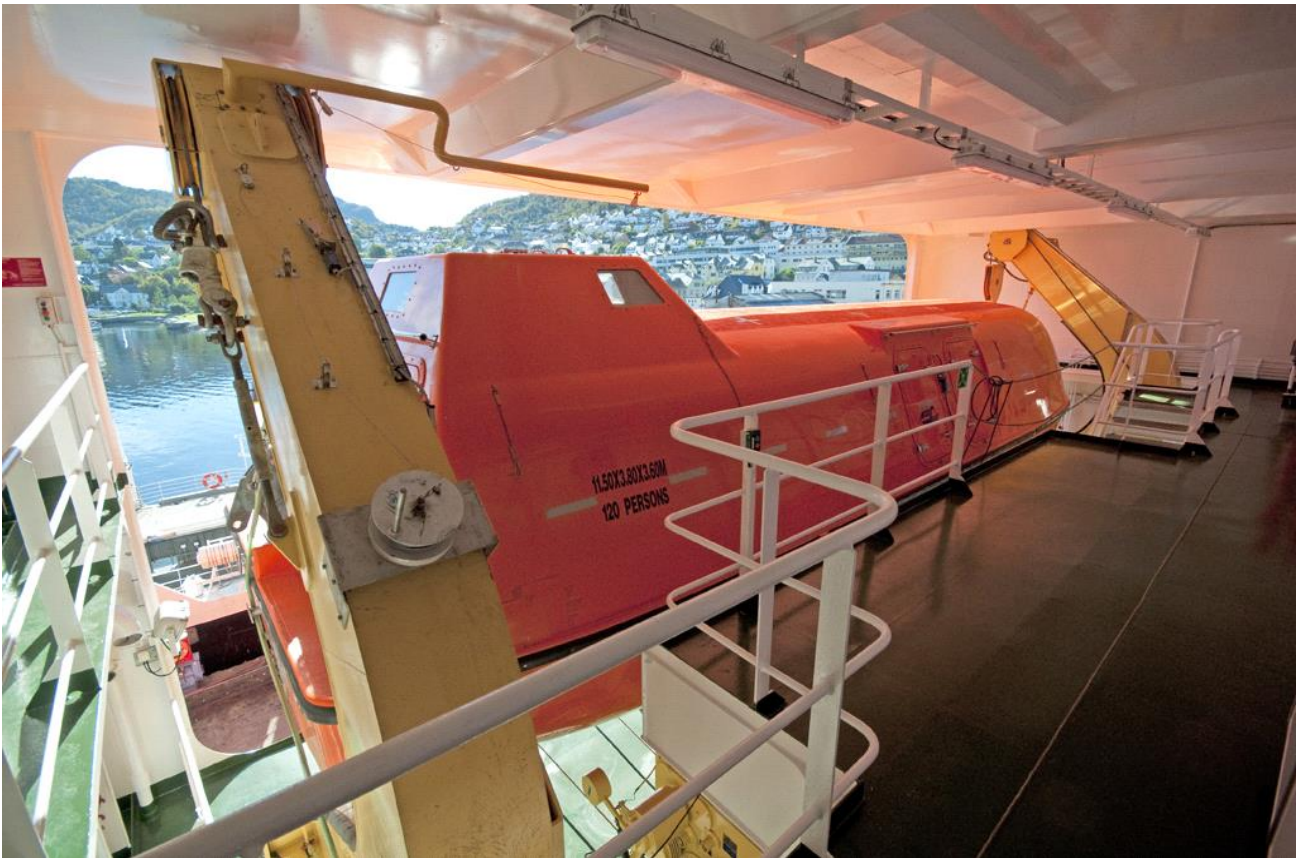
6.2 Ballast Capacity and Pumps

Capacity	3721 m ³
Ballast transfer pumps	2 x 100 m ³ /h

6.3 Waste management

Incinerator	Teamtec OG200C
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7 Safety Equipment

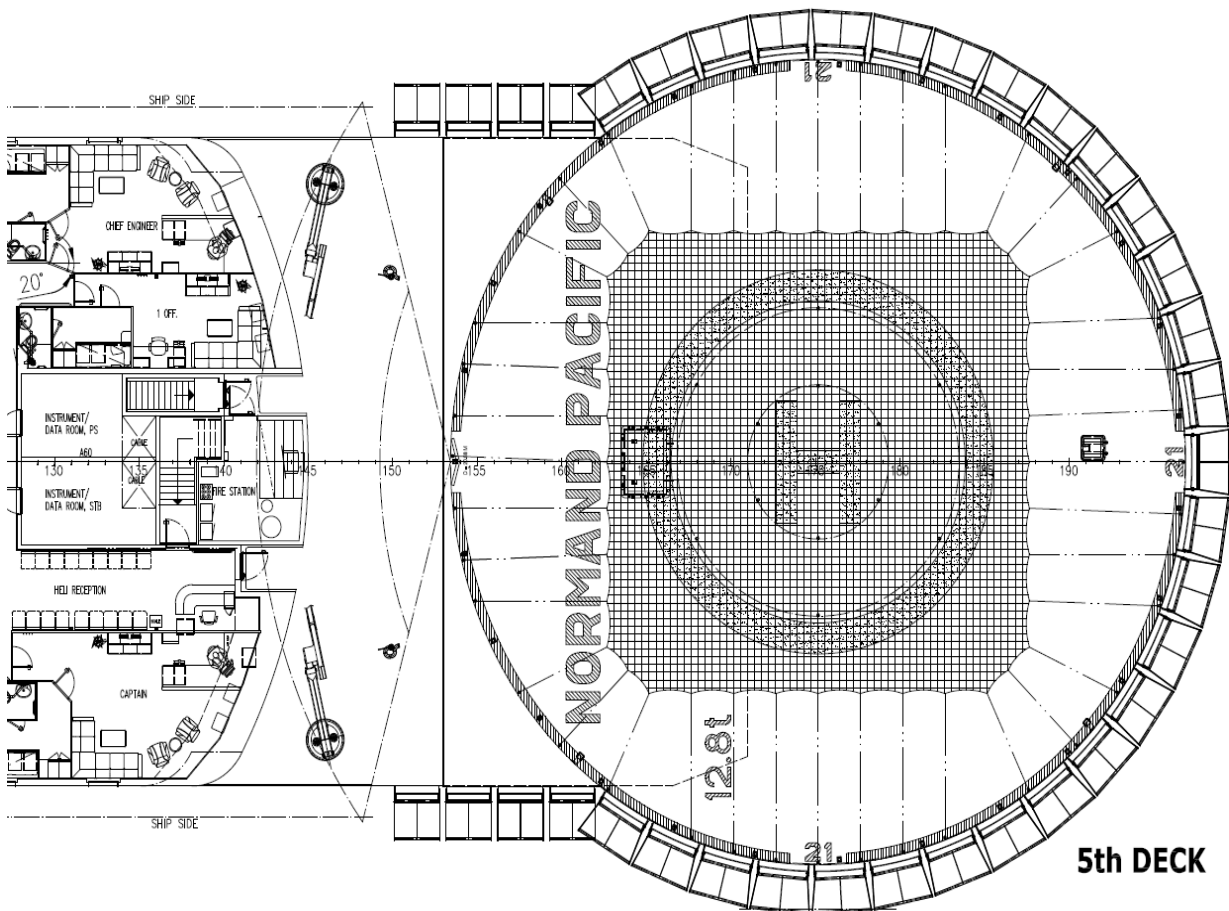


The Normand Pacific is fully compliant with SOLAS and flag state requirements for safety equipment and is certified for a total of 120 persons on board.

Lifeboats	2 x 120 pers. Norsafe JYN 115C
Life Rafts	4 x Viking 35DKF+ 2 x Viking 50DKS
MOB Boat	1 x Norsafe 750 Magnum, 230 hp, 6 persons
Immersion Suits	120 x Viking PS 5002
Life Jackets	120 x Sunnmøre Livbeltefabrikk Seamaster2010
Emergency Escape Breathing Devices	10 x Ocenco M-20.2
Emergency radios	3 x Jotron TR-20
EPIRB	Jotron Tron 60S
EPIRB (free float)	Jotron Tron 40S Mk II
Radar Transponders	Jotron TronSART 20
Fire Detection System	Eltek
Fire Pumps	2 x 115 m ³ /h, 9 bar
Emergency Fire Pump	1 x 50 m ³ /h, 7 bar

Fixed Water Mist System	In Engine Room, Incinerator Room and Harbour Generator Room
Firemen's outfits	6 x Complete Outfits
Foam System	Helideck only
Hospital	1 x bed + 1 x treatment table

8 Helicopter Operations



The Normand Pacific is equipped with a helideck capable of operations with heavy helicopters, maximum size Sikorsky S92.

8.1 Helideck Information Plate

Certifying Authority:	Helideck Certification Agency (HCA)
Certifications	Certified to CAP437, BSL D 5-1 & HCA requirements for offshore helidecks
Helideck position	Bow
Helideck elevation	56 ft
Height of installation:	118 ft
Fuelling Installation:	Nil
Starting Equipment:	Nil
Helideck D value	20.88
Helideck Diameter	26.1 m (D value x 1.25)
P/R/H Category:	Norway 3(B)
	UK 3(D)
Max Weight:	12.8 t
VHF	2 x Jotron TR-810D
NDB	410khz LAXI7
Pitch / Roll / Heave Equipment	Shore Connection, SECREC HMS
Area helideck:	$3.14 \times 13.05^2 = 534.74 \text{ m}^2$

9 Deck and Cranes



Normand Pacific with 150T A-frame (2021)

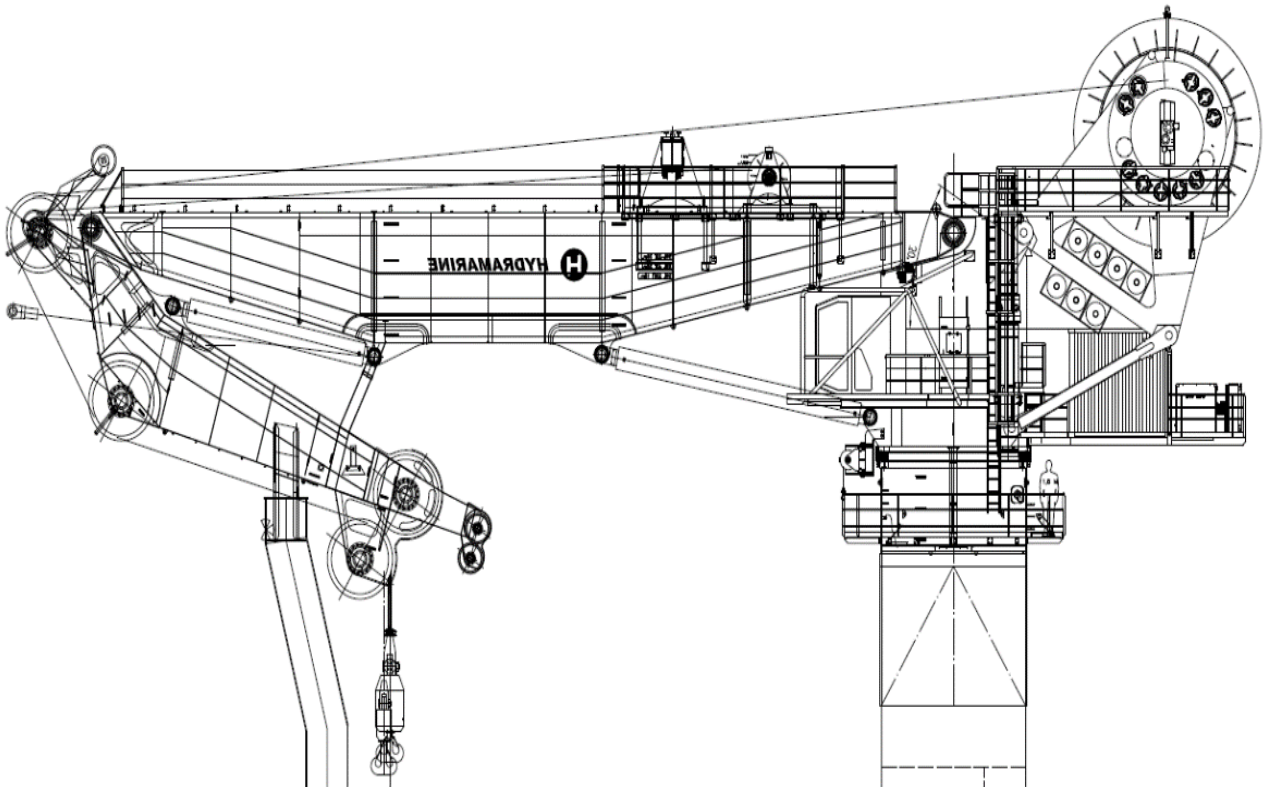
9.1 Main deck

Length:	64.6 m
Breadth:	23.0 m
Deck Area:	Appx. 1400 m ²
Deck Strength:	10T/m ²
Moonpool	7.2m x 7.2m Removable flush hatch
Removable bulwark	Yes, drawing available upon request
Offshore Crane	1 x MacGregor 200T AHC
Deck Cranes	2 x Dreggen 5T
Provision Cranes	2 x Heila Marine 1,55T
Capstans	2 x Mooring capstans aft, NDM 10T
Hatches	2 x hatches to client stores and engine stores

9.2 Deck facilities and connections

Air supply	5 on main deck, 1 in each ROV hangar 7 bar / 300 m ³ /h
Power supply	Full list available upon request

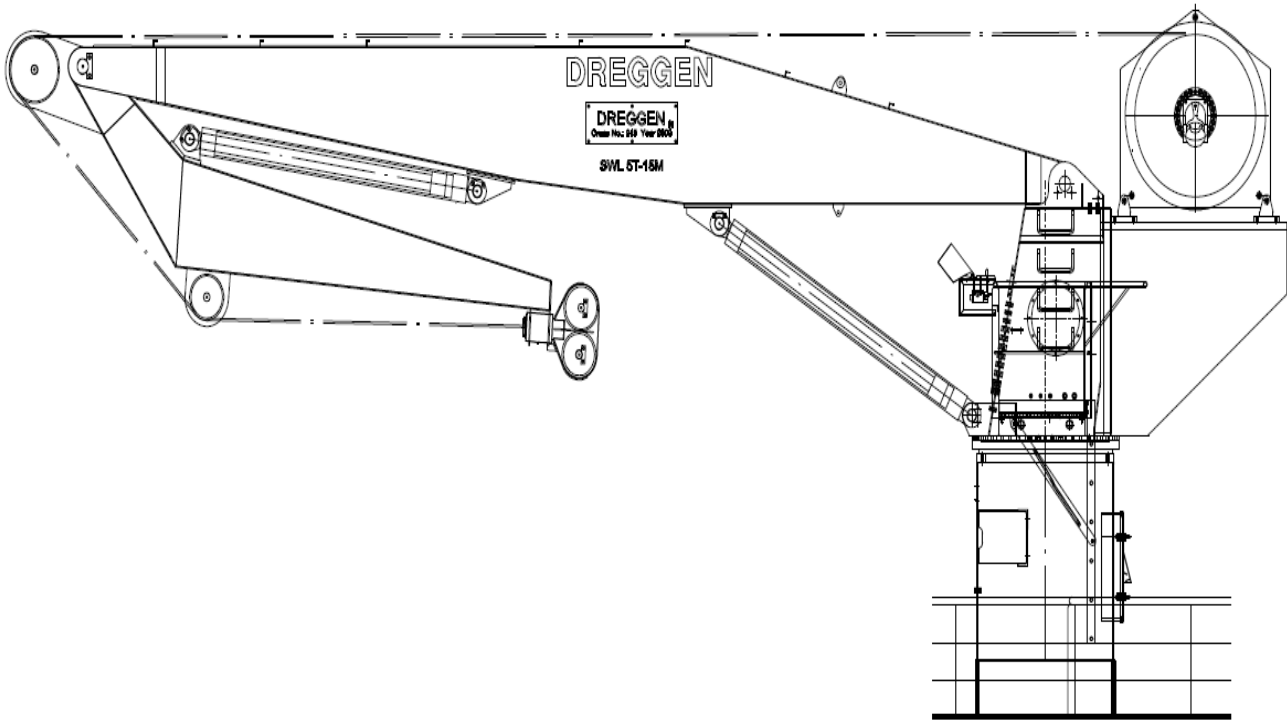
9.3 MacGregor 200T AHC Offshore Crane



The crane is of knuckle boom design with two hooks rated at WLL 200t and 20t, designed to deliver subsea loads to a depth up to 2000 meter. Both winches have active heave compensation capabilities. More information available upon request.

Manufacturer:	MacGregor
Type:	HMC 4240 LKO 400-35 AHC
Min / max radius main	8 m / 35 m
Min / max radius aux	8 m / 36 m
Main winch wire:	88 mm, 2000 meter
Aux winch wire:	32 mm, 2000 meter
Slew range	360° unlimited

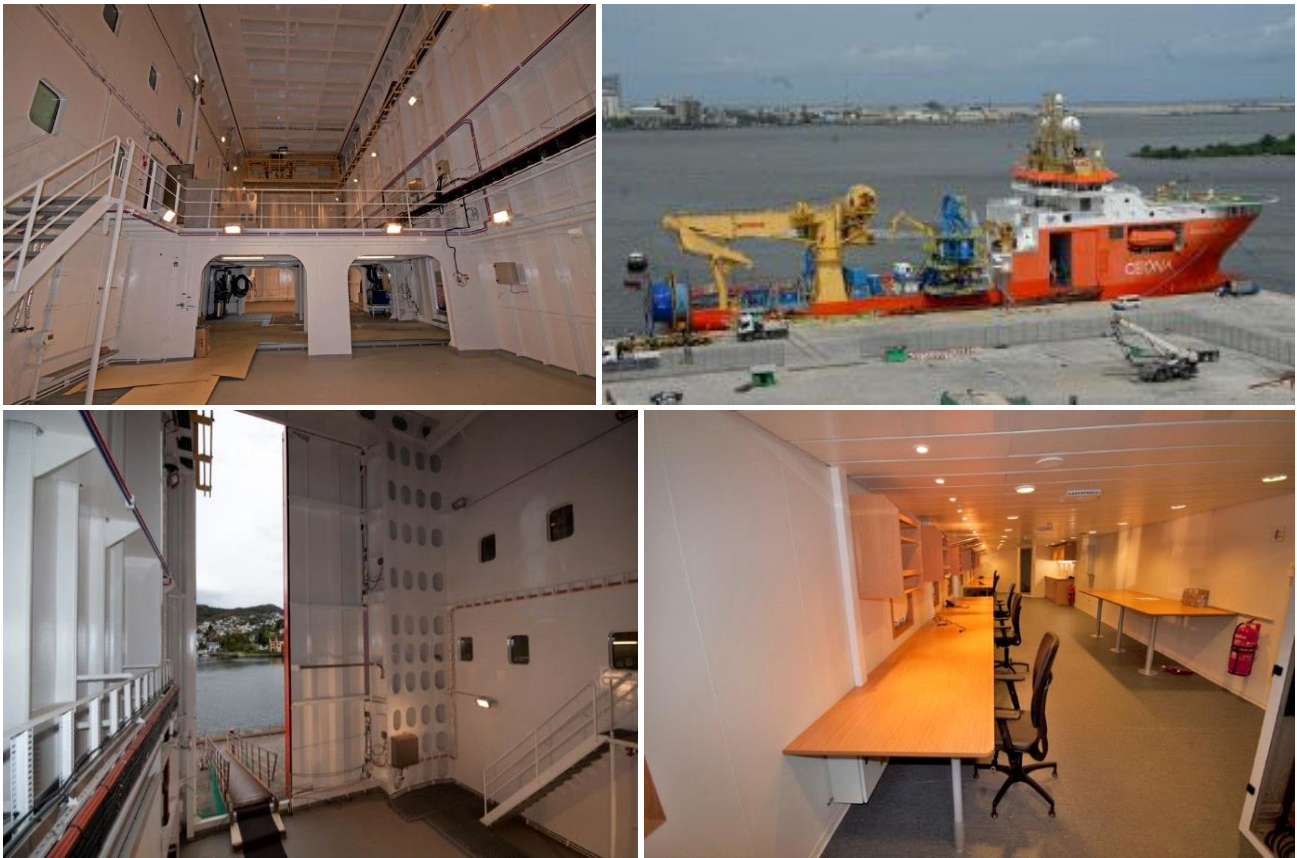
9.4 Dreggen 5T cranes



These cranes are of knuckle boom design, used as general deck cranes. The cranes are equipped with 500 meters of wire for delivering smaller loads subsea, and they can be controlled both manually on pedestal and by radio controls.

Manufacturer:	Dreggen
Type:	DKF 100 - 5T-15M
Wire:	18 mm, 500 meters

10 ROV facilities



10.1 ROV Hangars

The vessel is equipped with two spacious ROV hangars for two work-class ROVs. The hangar features a mezzanine deck for TMS winches. As well as a travelling, traverse underslung crane with 1 x WLL 40 tons and 1 x WLL 1 ton hooks for maneuvering equipment inside the hangars. Direct access to ROV Workshop with separate welding workshop and ROV Transformer Room

Dimensions	23 m x appx. 8 m
Deck area	184 m ²
Sliding doors clear opening	Appx. 5 m
Mezzanine deck	Appx. 8 m x 8 m
Travelling traverse crane	WLL 40 tons + WLL 1 ton
Air supply	2 x 7 bar / 300 m ³ /h, one in each hangar
Power supply	Available upon request

11 Accommodation



The Normand Pacific offers modern and comfortable accommodation. The accommodation includes a mess room, 2 day rooms, 1 smoker's dayroom, and a gymnasium with sauna.

Capacity	120 persons
Mess room	1, 62 seats
Galley	1
Laundry	3 (1 working clothes, 1 general, 1 officer's deck)
Dayrooms	3
Gymnasium with sauna	1
Conference rooms	2
Ship office	1
Client offices	7
Online room	1
Offline room	1



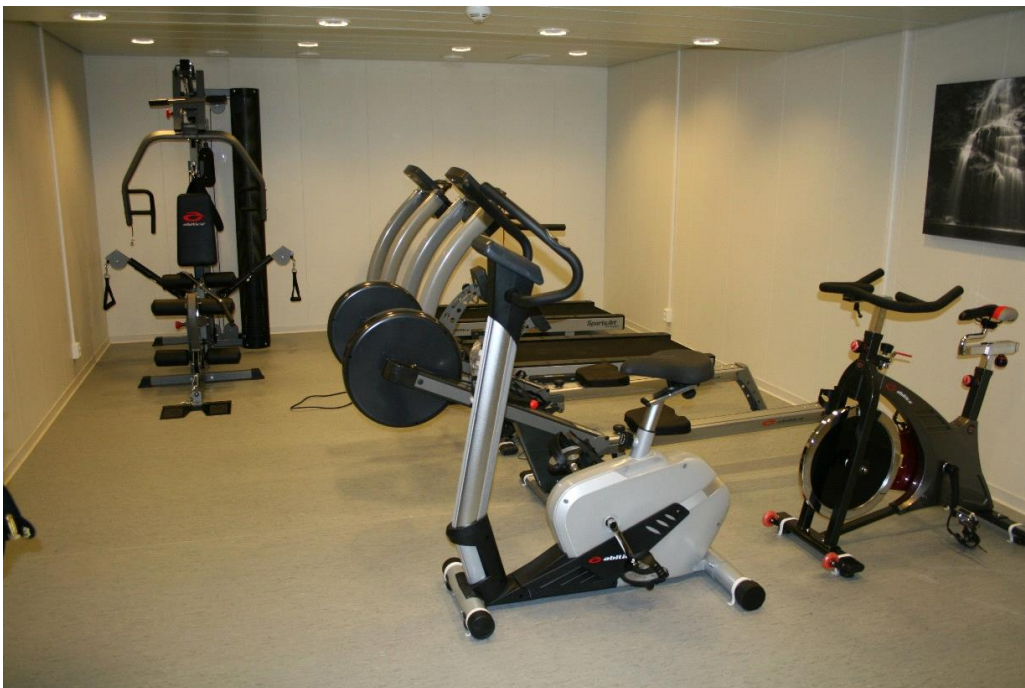
11.1 Cabins



The Normand Pacific is equipped with a cabin capacity of 120 persons, divided in 42 single cabins and 39 double cabins. There is a separate bathroom, with toilet and shower, in all the cabins.

Cabin accommodation	120 persons
Single cabins	42
Double cabins	39

11.2 Gymnasium



12 Appendices

The following appendices are available on request.

Ref	Description
1	General Arrangement Plan Original
2	General Arrangement A-frame 2021
3	Subsea crane working area diagram
4	Subsea crane load radius diagram ship to ship
5	Subsea crane load radius diagram internal lift
6	Subsea crane load radius diagram Subsea lift
7	Normand Pacific Clear Com drawing
8	Normand Pacific Clear Com list
9	Normand Pacific LAN Ships overview
10	Normand Pacific LAN Connections
11	Normand Pacific Utility Survey Stations
12	Normand Pacific Survey Box 1-3 overview
13	Normand Pacific Block diagram client power
14	Normand Pacific - AFT deck power distribution
15	Normand Pacific Utility Power supply Tween Deck
16	Normand Pacific No weld zones
17	Capability plot Normand Pacific