

TIM-DSV DP2-042
BUQUE DE APOYO AL BUCEO
DIVING SUPPORT VESSEL





MAIN CHARACTERISTICS

- **DP2 and 4 point mooring**
- **Length overall 75 meters**
- **Main crane: 45 tons**
- **Free deck area: 650 m²**
- **120 beds available for client**
- **Helideck cap.: 12 TM**
- **Diameter: 21 Meter**
- **Helicopter: Sikorsky S-92**



ACCOMMODATIONS

- Berth 8 x 1 berth cabins = 8 beds
- 6 x 2 berth cabins = 12 beds
- 30 x 4 berth cabins = 120 beds
available for client
- Total: 140 beds
- Hospital: 1 x 2 berth cabin = 2
- All cabins fully air-conditioned &
c/w attached washroom



CARGO CAPACITIES

- Deadweight: 2,827 m/t
 - Deck Cargo: 800 m/t
 - Deck Strength: 5.0 mt/m
uniform loading
 - Clear Deck Area: 650 m²
 - Fuel Oil: 1,180 m³
 - Fresh Water: 830 m³
 - Ballast Water: 1,644 m³
- 



PROPULSION SYSTEM

- Main Engines: 2 x 1,600 kWm @ 1,000 rpm Wartsila 8L20
- Main Generators: 5 X 590 ekW @ 1,800 rpm Caterpillar / 3412C c/w alternator SR4
- Emergency Generator: 1 X 99 ekw @ 1,800 rpm Caterpillar / C4.4 rated at 99 ekW/440 V/3 Ph/60Hz
- Shaft Generator: NIL
- Bow Thruster: 1 x Caterpillar C32 1,000 bhp diesel engine driven HRP 5007 TT Tunnel type (CPP); 11.5 thrust
- Stern Truster: HRP 5007 TT tunnel type (CPP); 8T thrust
- Steering Gear: 2 x Wagner LA2 7.1-45-CB2 7.1 TM; 45 deg
- Propulsion: 2 x CPP in Kort Nozzles; Lips 4D650
- Rudders: 2 x Becker Rudder/SA 2050 03 F.2



PUMPS

- Fuel Oil: 1 x 30 m/hr @ 20m head;
Bombas Azcue
- Fresh Water: 1 x 60 m/hr @ 40m head;
Bombas Azcue
- Bilge/Fire Pump: 1 x 60 m/hr @ 45m
head; Bombas Azcue
- Bilge/Ballast Pump: 1x150 m/hr@ 25m
head; Bombas Azcue

DECK EQUIPMENT

- Anchor Windlass: 1 x electro-hydraulic Macgregor/PC-HAW/GG-50
- Gypsies: Suit for 50 mm ()chains Rated pull 10.6 mt @ 10 m/min
- Warping drum: 400 mm (dia) x 660 mm (L)
- Bow Anchors: 2 x 3,060 kg Stockless Bower anchors
- Chains: 495 Total Length x 38 mm (día) Grade 2
- Capstan: 2 x 5 mt @ 15m/min electro- hydraulic; MacGregor / PC-HVC-05/400 Mooring Winch: 4 x 50 mt @ 10m/min electro-hydraulic; Macgregor/PC-HMW/SD-40/090D
- Drum Capacity: 1500 m (L) x 38 mm () SWR
- Deck Crane Capacity: 45 T @ 8 m Personnel Lift: 1.5 t @ all radi
- Provision Crane: 1x electro-hydraulic Amco Veba/807/35-3 Ton @ 1.7 m



FIRE FIGHTING EQUIPMENT & ANTI-POLLUTION EQUIPMENT

- Emergency Fire Pump: 1 x 40 m/hr @ 45 m head; Bombas Azcue
- BA Recharging Comp: 1 x 100 ltrs/min @ 200 bar Brand/Model TBA
- CO system in engine room
- Fire Detection & Alarm System in living spaces & engine room



MISCELLANEOUS

- Liferafts: 4 x 25 men SOLAS approved Type Life
- Boat: 2 x 60 men totally enclosed Vanguard
- Rescue Boat: 1 x 8 men Rescue Boat
- Inboard Diesel Engine Driven Vanguard
- Oily Water Separator: 1 x 1 m/hr c/w 15 ppm
- Water Maker: 2 x 20 m/day Reverse Osmosis
- Coffin Sewage Treatment Plant: 1 x 140 men;
Hamworthy/ST13



PERFORMANCE

- Maximum Speed: 12 knots at MCR
- Typo of Fuel: Marine Diesel Oil

Fuel Consumption (ton/day):

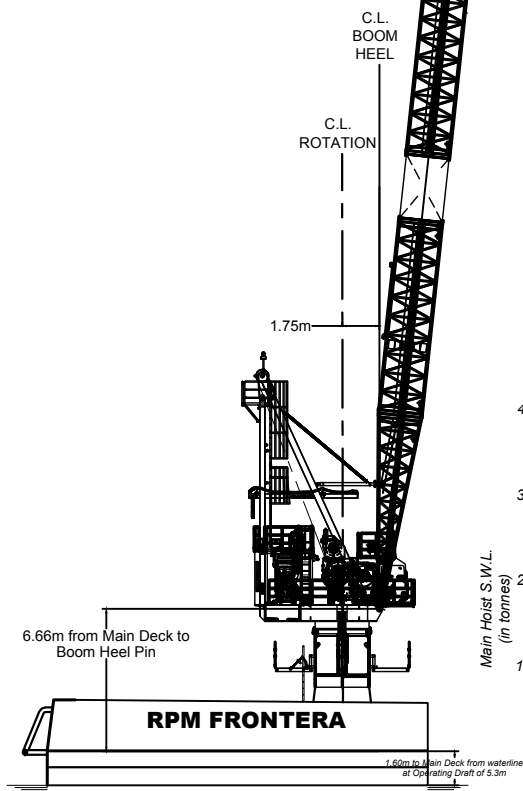
- Anchorage / Idle: 1.07
- Navigation (Economic): 6.1
- Navigation (Max): 14.5
- DP operation (ECO mode): 14.2
- DP operation (Full): 21.7

RADIO AND NAVIGATION EQUIPMENT

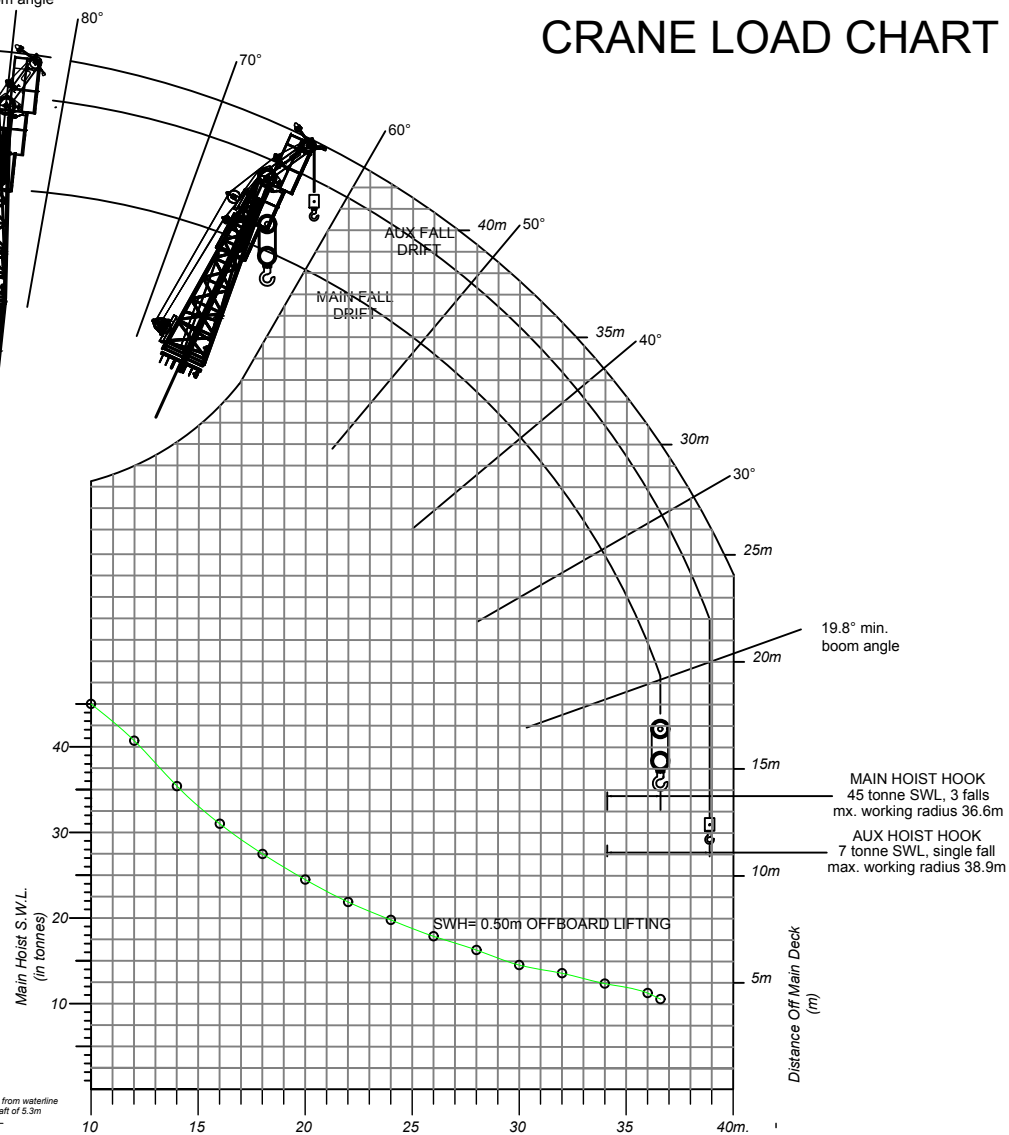
- GMDSS: Furuno RC-1800T 250W (Area 3) comprising
- SSB: 1 x Furuno FS-2570 with built in DSC Inmarsat C: Felcom-15 SSAS & LRIT
- VHF Radio: 2 x Furuno FM-8800S with build in DSC Navtex Receiver: 1 x Furuno NX-700 (518 KHz) SART: 2 x McMurdo S4
- EPIRB: 1 x McMurdo S4
- Portable VHF Radios: 3 x McMurdo R2 (25KHz) Radar (S-Band): 1 x Furuno FAR-2137S ARPA 96 NM Radar (X-Band): 1 x Furuno FAR-2117S ARPA 96 NM Echo Sounder: 1 x Furuno FE-700
- GPS: 3 x Veripos LD3 System
- GPS: 1 x Furuno GP-150
- Gyrocompass: 3 x Anschuetz Standard 22 Autopilot: 1 x Cassens & Plath REFLECTA 1 Weather Fax: 1x Furuno FAX408
- Speed Log: 1 x Furuno DS-80
- Wind indicator: 3 x Gill Instruments WindObserver II 1390-P
- AIS: 1 x Furuno FA-150
- VDR: 1 x Furuno VR-3000
- DP: Converteam Duplex C-Series
- Joystick: Converteam Independent Joystick
- Vessel also fitted with Vingtor PA Talkbalk System & Self-Powered Telephones



S/N 1641 (7.5/10K) - 36.6m BOOM
 MAIN HOIST 3 FALLS / AUX. HOIST 1 FALL /
 BOOM HOIST 8 FALLS
 H 7064 OTTO MARINE
 DP2 RPM FRONTERA



RPM FRONTERA CRANE LOAD CHART



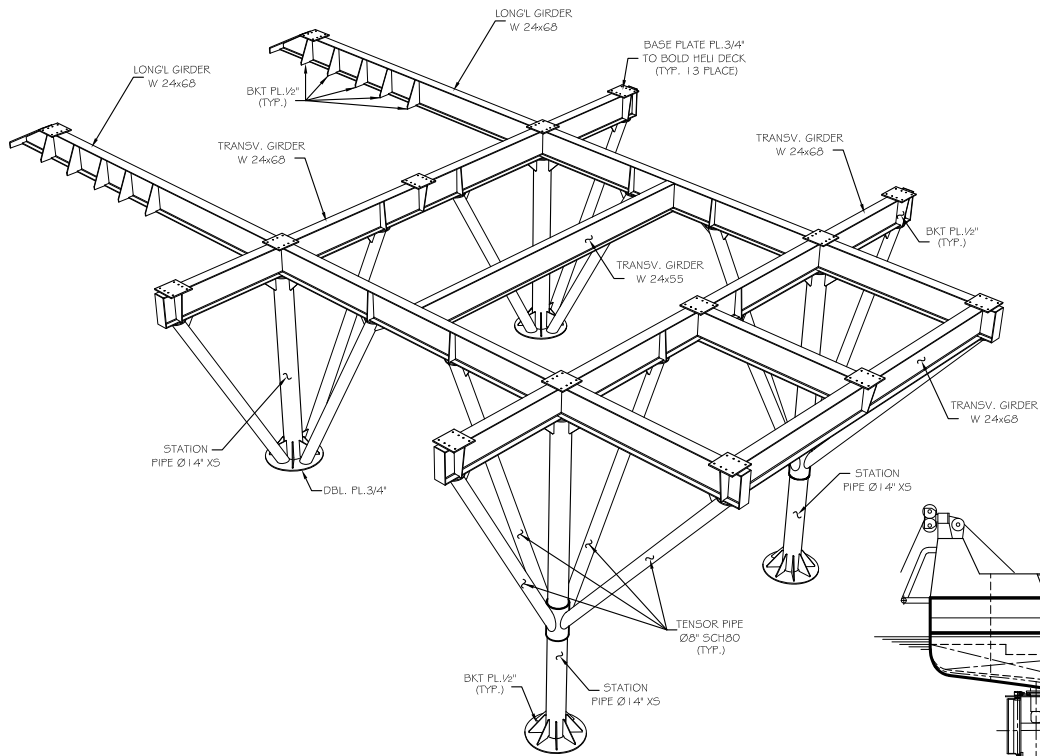
AUXILIARY HOIST S.W.L. 7.0 T @ ALL RADII (SWH=0.5m, SWH=1.0m, SWH=1.5m)
 AUXILIARY HOIST S.W.L. 6.0T @ ALL RADII (SWH=2.0m)
 AUXILIARY PERSONNEL LIFT 1.5T @ ALL RADII
 (M.B.L. 7.5m TO MAX. 38.9m)
 API 2C MINIMUM RECOMMENDED HOOK SPEED: 0.3 m/sec
 MAXIMUM OPERATING WIND SPEED: 20 m/sec
 RATING METHOD: GENERAL METHOD
 <5° LIST ANGLE CONDITION

D

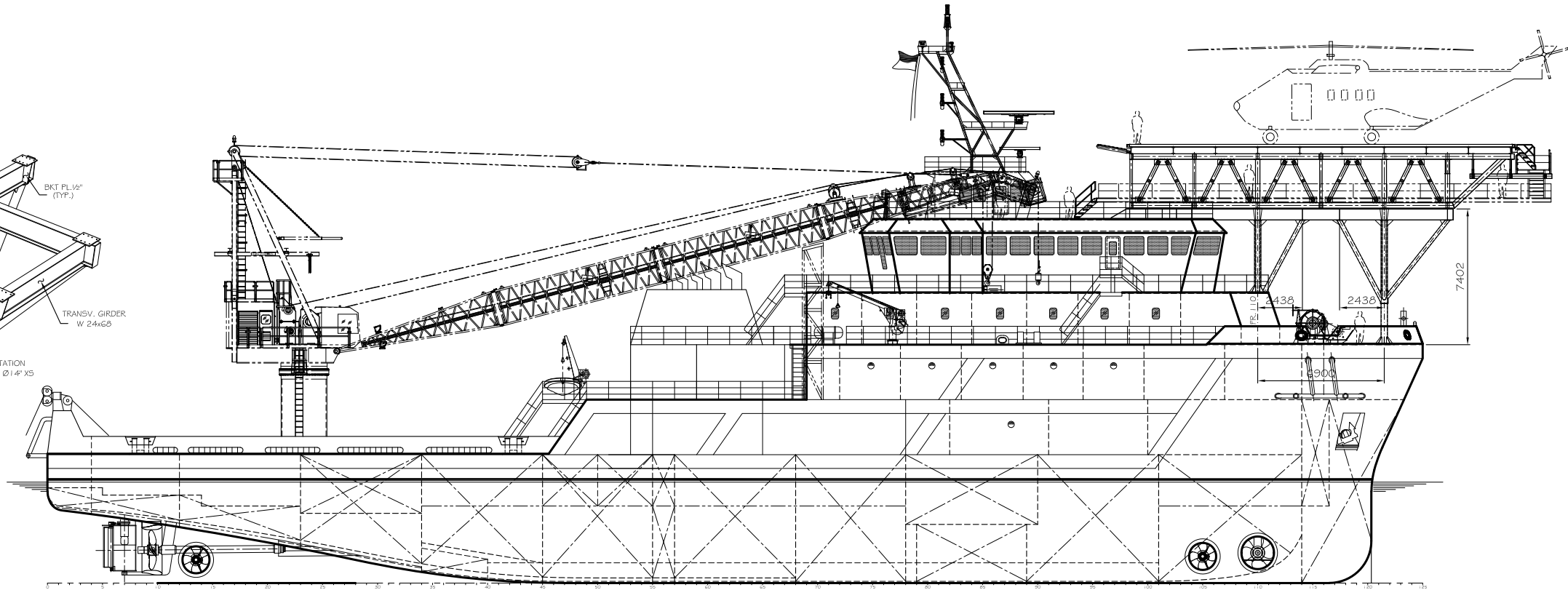
C

B

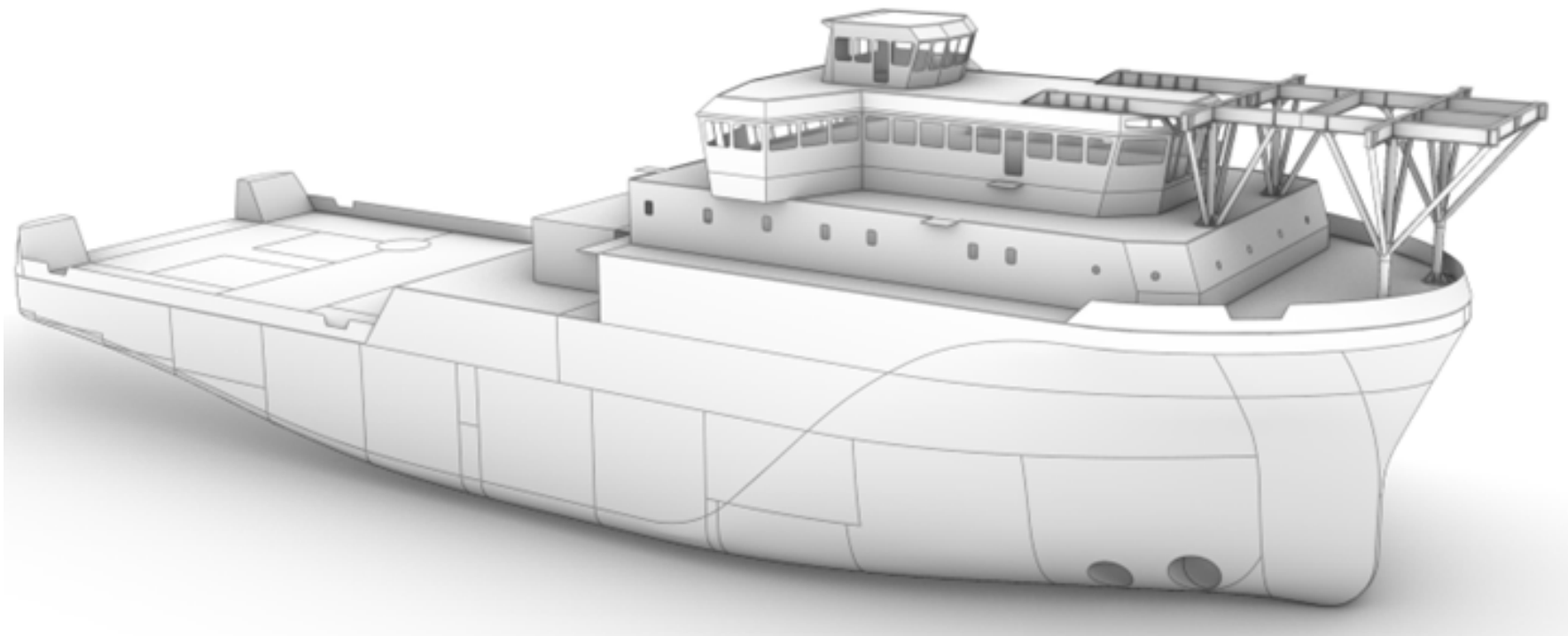
A



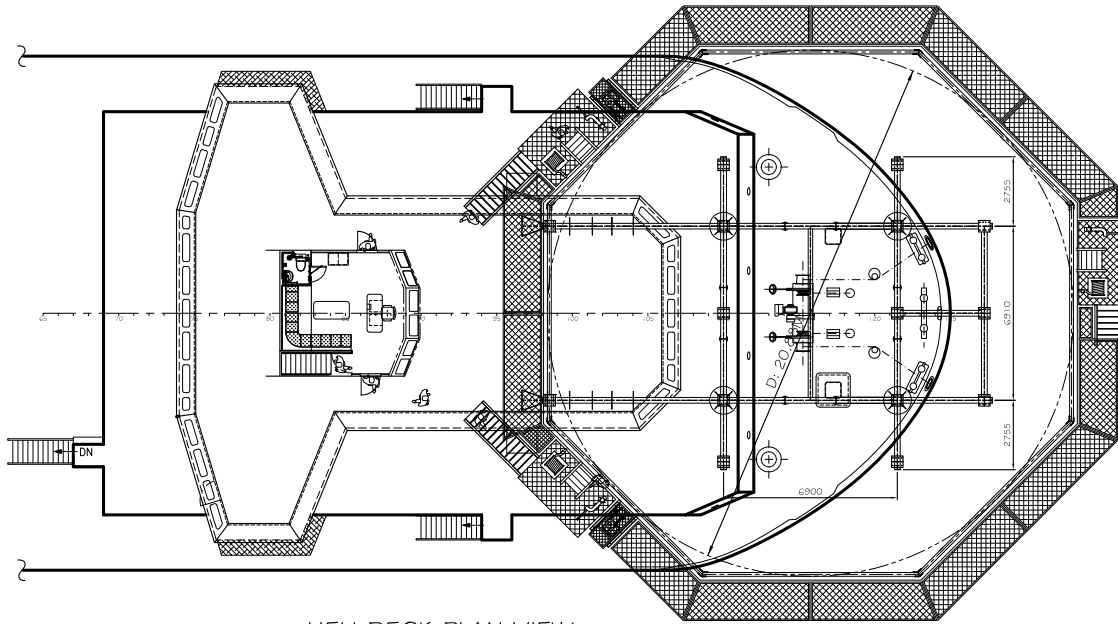
HELI DECK STRUCTURE SUPPORT
MAIN SCANTLING



LONG'L EXTERNAL PROFILE



HELI DECK LAYOUT 3D MODEL



HELI DECK PLAN VIEW

MAIN CHARACTERISTICS:

LENGTH OVER ALL	= 75.00 M
LENGTH BETWEEN PERPENDICULARS	= 68.00 M
MOLDED BEAM	= 20.40 M
MOLDED DEPTH	= 7.00 M
MOLDED DRAFT	= 5.50 M
FRAME SPACE	= 0.60 M
ACCOMMODATIONS	= 140 PER.



JH VALDES DESIGN, Naval Achitecture & Structure

NOMBRE DEL PROYECTO:

WORK VESSEL ORANDA I

APROBO:
ING. MARCELO RUIZ

PROYECTO:
Remolcadores Portuarios Mexicanos

DISEÑO:
ING. JORGE VALDES

DESCRIPCION DEL PROYECTO:

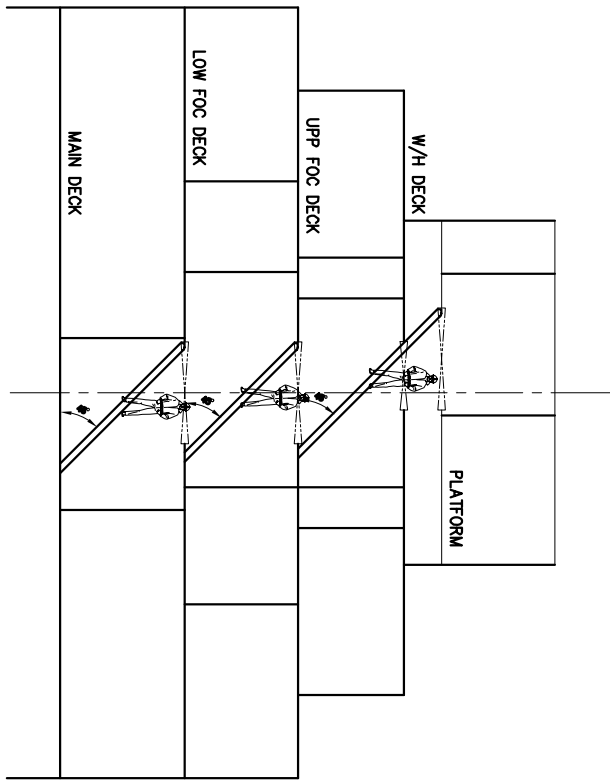
NEW HELI DECK
STRUCTURAL LAYOUT

ESC:	REV.:	FECHA:	DWG No.:	HOJA:
1=300	A	13/09/2024	P076-2100-01	1 / 1

NOTA: ESTE PLANO ES DE PROPIEDAD DE
JH VALDES DESIGN, Naval Achitecture
& Structure.
NO DEBE SER USADO PARA CONSTRUCCION
O MANUFACTURA, O DUPLICADO O COPIADO
O SOMETIDO A PERSONAS AJENAS SIN
CONSENTIMIENTO ESCRITO.

PRINCIPAL PARTICULARS

LENGTH O.A	75.00m
LENGTH WL	72.2m
BEAM MLD.	20.40m
DEPTH MLD.	7.0 m
DRAFT DESIGNED	5.50m
COMPLEMENT	140 MEN
CLEAR DECK SPACE	650m ²

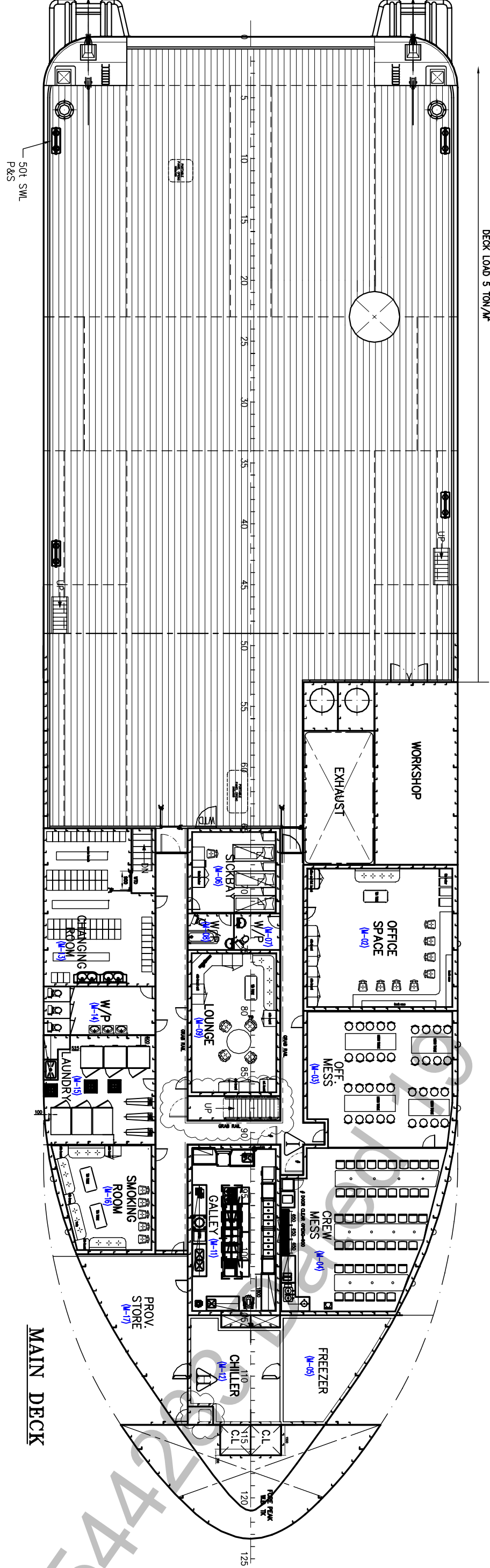


SECT I.W.O. LADDER TRUNK
(Looking fwd)

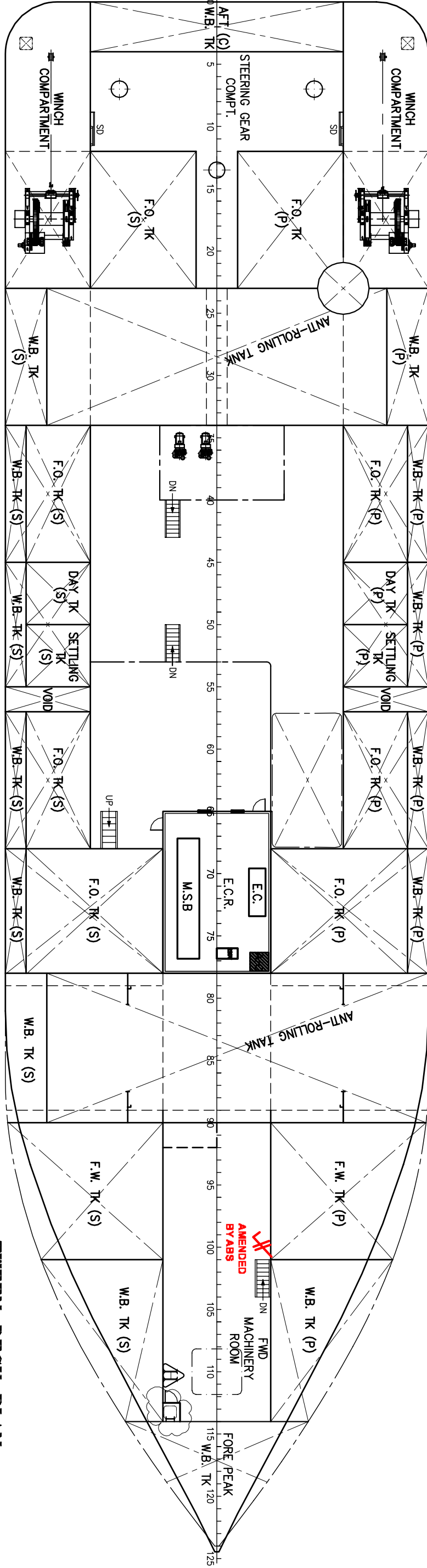
(##) : - TO PROVIDE NATURAL LIGHT, SEE ABS COMMENT L-003.

✕ : - MEANS OF ESCAPE TO BE PROVIDED.

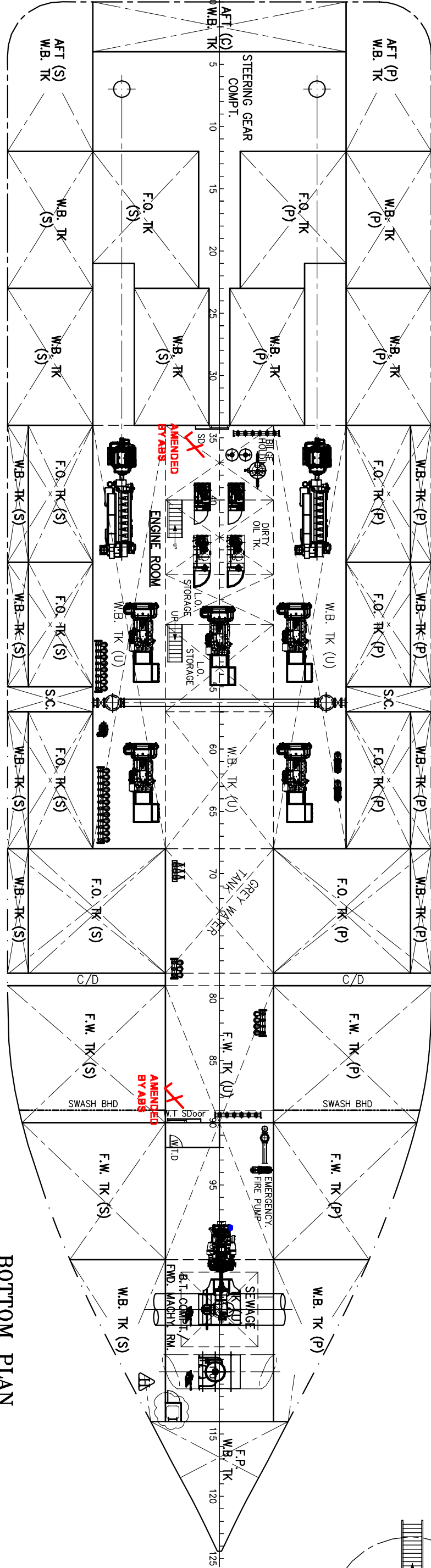
✕ : - WATERTIGHT SLIDING DOOR TO COMPLY WITH RULE 3-2-717.1 OF SVR-90M.



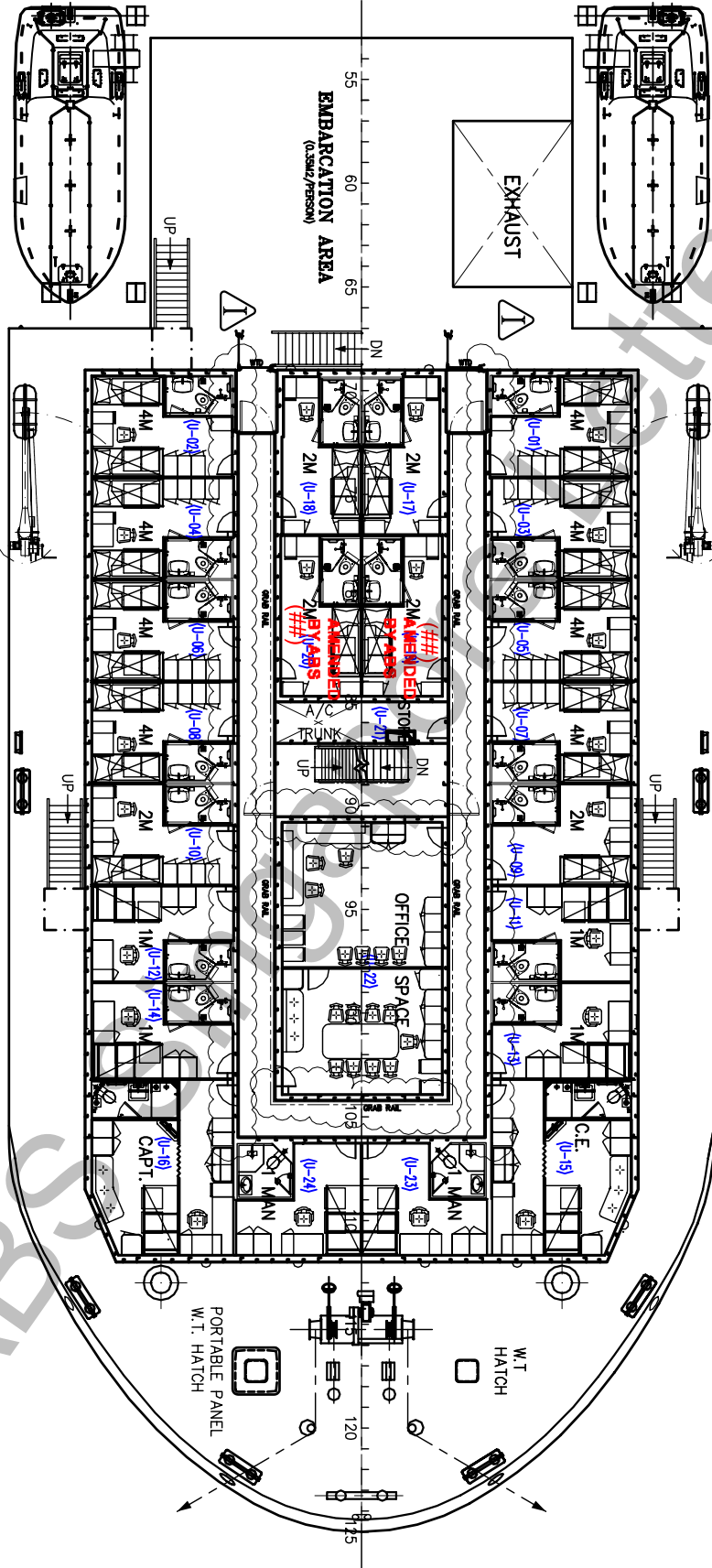
MAIN DECK



TWEEN DECK PLAN

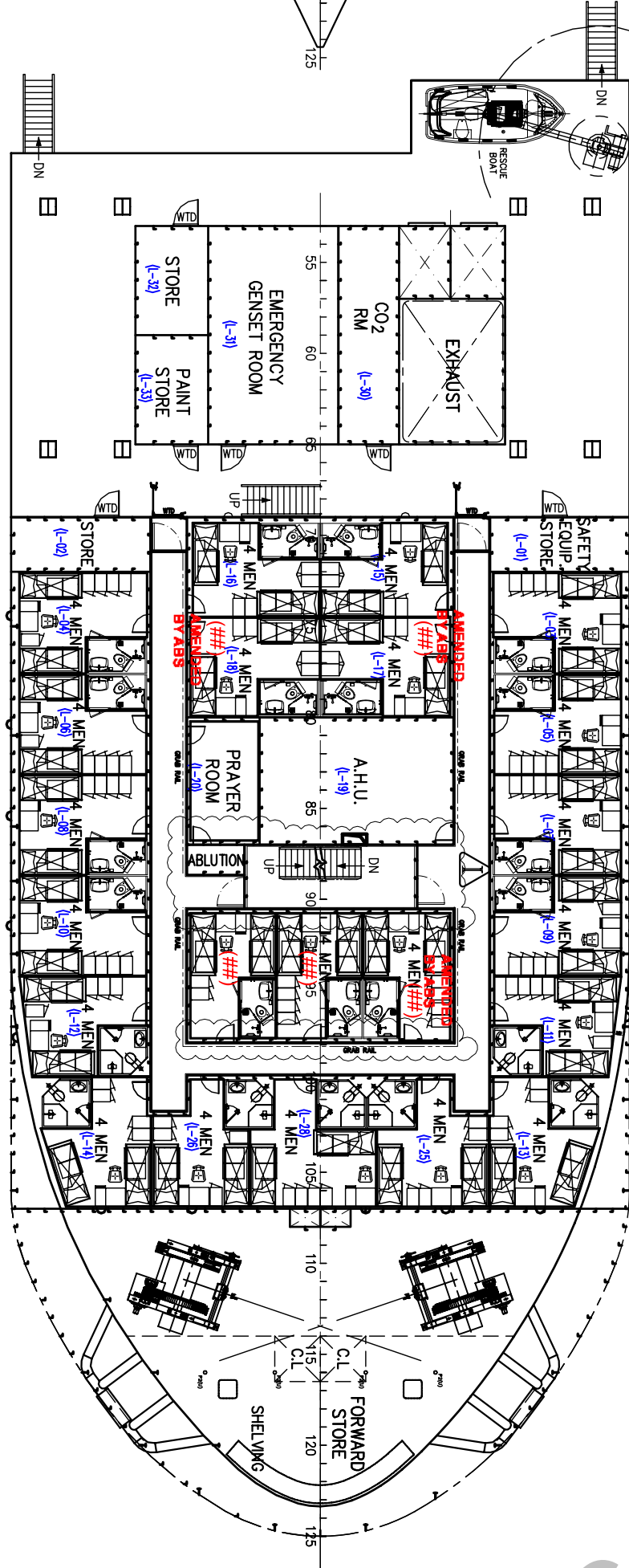


BOTTOM PLAN



UPPER FORECASTLE DECK

6 x 1 MAN = 6 MEN
6 x 2 MEN = 12 MEN
8 x 4 MEN = 32 MEN
TOTAL = 50 MEN



LOWER FORECASTLE DECK



4/12/09	I	UPP FOC DECK REMOVED TRANSV. BRD @ FR 85, TRANSV BRD @ FR 80-400 & FR 1044+200 MOVED Bottom AFT RESPECTIVELY & LOW FOC DECK REMOVED TRANSV BRD @ FR 85, TRANSV BRD @ FR 80-400 & FR 1044+200 MOVED Bottom AFT RESPECTIVELY. MAIN DECK MOD LADDER ORIENTATION & AS INDICATED	OS
13/11/09	H	MOD TO CLASS RESPONSE 912883 D4.6/11/09 & MEETING WITH OWNER/REP ON 10.11.09 @ WARSILO OFFICE & ADD ESCAPE HATCH W.I DOOR @ FR 90, FR 99 CONVERT TO SWASH BRD, SLIDING W.I.D	OS
24/9/09	G	ADD BRD @ FR 90, FR 99 CONVERT TO SWASH BRD, SLIDING W.I.D	OS
18/8/09	F	CHANGES GRADE MODEL TO FAALTE FA00	TRANSV TRUSS /OS
7/7/09	E	MODIFIED LINES AT MAIN DECK ACCOMMODATION & CRANE & TO SUIT FSS CODE	TRANSV /OS
06-02-09	D	MODIFIED AS PER OWNER'S COMMENTS	TRANSV /OS
14-10-08	C	UPDATED THE NUMBER OF THE MAIN GEN FROM 3 TO 5	TRANSV /OS
2-1-09-08	B	SHIFT THE GRADE TO PORT SIDE	TRANSV /OS
11-07-08	A	MODIFIED AS PER OWNER'S COMMENTS	TRANSV /OS
DATE	REV	MODIFICATION	BY

SHIP:	75m Maintenance/Work Vessel
TITLE:	General Arrangement
OWNER:	OTTO OFFSHORE PTE. LTD
BLUDDER:	ZHEJIANG SHENZHOU SHIPBUILDING CO.LTD
CLASS:	ABS
YARD NO.:	H7064/7065
CONAN WU & ASSOCIATES	
NAVAL ARCHITECTS	
MEMPH BUILDING L&E P&E	
SINGAPORE 069614	
TEL: (65) 6562-1138 FAX: (65) 6562-1238 / 6562-0173 E-MAIL: mdf@conan.com.sg	
TEL: (86) 21-63793801/63793806 FAX: (86) 21-63797322 E-MAIL: mdf@conan.com.sg	
CHINA	
CHINA	
SCALE	1:200
DRAWN	C4483A/G-1
CHECKED	I
APPROVED	I
CHIA/LIA	CHIA
11-02-08	11-02-08

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Main results

OSV RPM FRONTERA - Platform Supply Vessel

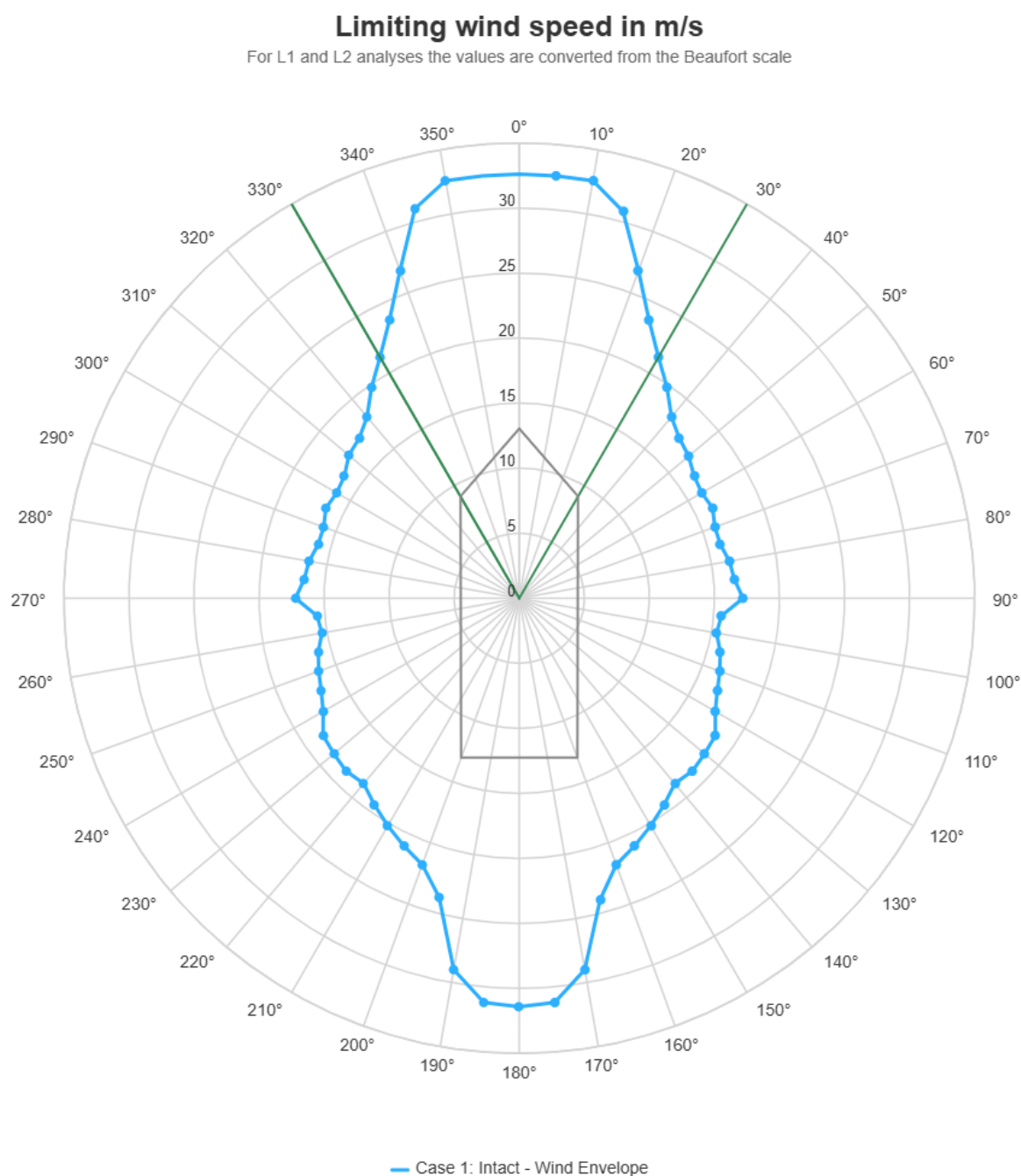


Figure 1: Case 1: Intact - Wind Envelope