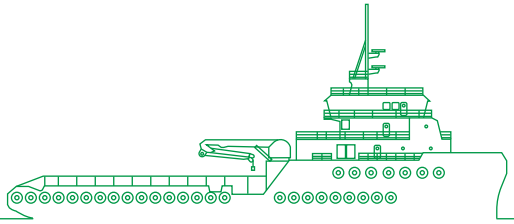
مبارك البحرية
Mubarak Marine

Mubarak Spirit

Multipurpose offshore supply vessel

At 64.8 m in length, this modern DP2 multipurpose supply vessel is equipped with a 10-ton deck crane and can hold a crew of up to 42 people. Ideal for transporting cargoes on deck, transferring fuel oil, fresh water, and mud for supporting construction and diving projects.



Registration

Year of build	2017
Builder	Dubai Shipbuilding & Engineering LLC
Port of registry	Dubai
Flag	UAE
Call sign	A6E2566
IMO number	9773507
Class	ABS
Owner	Mubarak Marine LLC

Dimensions

Length overall	64.8 m
Breadth moulded	16 m
Depth at freeboard deck	6.5 m
Draft designed	4.9 m
Lightship draft	3.3 m

Machinery/propulsion

Main engine	2x Niigata marine diesel engines
Horsepower/RPM	6400 HP total (2x 3200 HP each) @ 750 RPM
Generator no. 1 and 2	Total of 2230 kW (2x 1115 kW each)
Generator no. 3 and 4	Total of 1100 kW (2x 550 kW each)
Emergency/harbour generator	416 kW
Propulsion units	Niigata ZP, 360 steerable, Z-drive with dual modulation clutch
Propellers	360˚ steerable Z-drive fixed pitch
Bow thruster	2210 HP total (2x 1105 HP each) CPP, motor driven

Tonnage

GRT	2233
NRT	669
Light ship displacement	2212 mt
Deadweight (OSV)	2048 mt

Performance

Service speed	13 knots @ 100% MCR
Bollard pull	82 t (ahead pull), 85 t max
Clear deck space	416 m^2

Accommodation

Single cabin	4 persons
2-men cabin	6 persons
4-men cabin	32 persons
Total accommodation	42 persons
Galley	Raised deck
Mess room	Raised deck (24 persons in one seating)
Recreation room	Raised deck
Sick bay	Raised deck

Navigation/communication equipment

Magnetic compass	Lilley & Gillie – MK2000
Gyrocompass	Sperry MK 1, mod 10
Pelorus	Lilley & Gillie MK056
Track control system	NAVITRON NT999G
Radar	JRC JMA-5300 Mk2
Gyro	Kongsberg Navigat X MK I
Echo sounder	JRC JFE-380
VHF	Cobham – Sailor 6215
VHF hand held GMDSS radio	Entel HT649
AIS	RC JHS 183
SSAS/LRIT	Cobham – Sailor 6120
VHF	Cobham – Sailor 6222
MF/HF	Cobham – Sailor
NAVTEX receiver	JMC NT 1800
Simplified voyage data recorder	Danelec DM200 (S-VDR)
Receiver (GNSS)	JRC JLR 7800
9GHz radar	JRC JMA 5312
9GHz radar transponder	ACR - Pathfinder3 Sart
Two-way VHF radiotelephone	Entel HT649
VHFI DSC	Cobham – Sailor 6222
EPIRB	McMurdo Smartfind E5
Electronic plotting aid (EPA)	JRC
Speed log	JRC JLN 652
Rudder angle indicator	Niigata Power Systems ZP-41

DP system

DP system	DP-2, Kongsberg K-POS 21
Control system	Kongsberg C-JOY
DP reference system	2x DGPS, 1x cyscan, 1x HIPAP
DP sensors	3x wind sensors, gill ultrasonic, 3x gyro compass, 3x motion ref unit (2x MRU-D + 1x MRU-5)

Firefighting/safety equipment

External firefighting	FIFI-1 class
Fire station/extinguisher	As per SOLAS
Life rafts/jackets	As per SOLAS
Rescue boat	1x 170 HP hamilton water jet suitable for 15 persons
Davit	1x hydraulic pivoting davit system, SWL 36kN

Deck equipment

Anchor handling/towing winch	Double drum, waterfall type, electro hydraulic
Drum brake holding	200 mt (static @ 1st layer)
Drum pull (first layer)	150 mt pull at first speed (6 m/min), 75 mt pull at second speed (6 m/min), 25 mt pull at third speed (36 m/min)
Capacity	1000 m x 56 mm diameter wire rope
Capstan	5.5 mt rated pull capacity
Tugger winch	2x 10 mt rated pull capacity
Storage reel	1x 1000 m x 56 mm diameter rope capacity
Anchor windlass/towing drum	Hydraulic, with double gypsies and one towing drum and double warping heads
Windlass	42 mm chain size, 11 t gypsy pull
Towing drum capacity	220 m x 64 mm PP rope
Towing drum brake holding	90 mt (static-1st layer)
Deck crane	HEILA crane HR 180, 10 t @ 15 m hook travel at 90 m
Stern roller	2200 mm diameter x 5 m long
Oil dispersant boom	2x 8 m

Capacities

Fuel oil	575 m^3
Fresh water	422 m^3
Fresh water maker	1 unit x 12 m^3/day
Dry provision	31.5 m^3
Freezer/chiller	23.4 m^3
Liquid mud/brine	466 m^3 (325 m^3 + 141 m^3)
Bulk cement	212 m^3 (4x 53 m^3)
Drill water/water ballast	762 m^3
Sewage treatment	1 unit vacuum type for black and grey water

Cement bulk handling system

Air compressor	2 units 18.7 m^3/min @ 5.6 bar
Compressor capacity	18.7 m^3/min @ 5.6 bar with 90 kW/motor
Refrigerated air dryer	2 units 18 m^3/min @ 6 bar with water separator, sea water cooling pump C/W starter and moisture separator C/W auto drain trap

Mud/brine system

Liquid mud cargo pump	2 nos– two speed electric driven pump
Capacity	80 m^3/h, 37 m^3/h
Liquid mud/brine pump	2 nos (1 working and 1 stand by) with cross over connection
Capacity	80 m^3/h, 37 m^3/h
Liquid mud agitator	1 no. each tank – hydraulic driven of type PG-Submix 80 with viscoprop 2500 mm
Re-circulation system	Drop/re-circulation system vessel fitted with deluge lines located below the main deck

Other pumps

Fuel oil cargo pump	100 m^3/hr @ 70 m head
Fresh water cargo pump	100 m^3/hr @ 70 m head
Drill water pump	100 m^3/hr @ 70 m head
Fuel oil transfer pump	20 m^3/hr @ 30 m head
Bilge/ballast pump	60 m^3/hr @ 60 m head
Bilge/fire main pump	60 m^3/hr @ 60 m head
Fire/GS pump	60 m^3/hr @ 60 m head
Emergency fire pump	40 m^3/hr @ 60 m head
Lube oil transfer pump	8 m^3/hr @ 25 m head
Sludge/dirty oil pump	8 m^3/hr @ 35 m head
ME ST-BY FW cooling pump	80 m^3/hr @ 30 m head
ME ST-BY SW cooling pump	110 m^3/hr @ 20 m head
Bow thruster SW cooling	14 m^3/hr @ 50 m head
FW pressure set - 2 pumps + 1 tank	5 m^3/hr @ 40 m head

The mezzanine deck, LARS, and associated equipment were installed for the current charter and are not part of the original fit-out. The crane was also moved from midships to an aft position and can be moved back, if required.

Tank number	Ballast water	Pot water	Fuel oil	Drill water	Dry bulk	Liquid mud	Brine	Lube oil	Hydro oil	Sewage	Dirty oil	Bilge water	Foam	Dispersant
01C	101.1			101.1										
301C	143.9			143.9										
31P	103			103										
31S	103			103										
32P	91.5			91.5										
32S	91.5			91.5										
33P	17.8			17.8										
33S	17.8			17.8										
34P	15.1			15.1										
34S	15.1			15.1										
206P	31			31										
206S	31			31										
101P		17.4												
101S		17.4												
102P		11.5												
102S		11.5												
11P		81.2												
11S		81.2												
12P		101												
12S		101												
202P			38.1											
202S			38.1											
203P			51.8											
203S			51.8											
207P			49.8											
207S			49.8											
22P			42											
22S			42											
24P			20.8											
24S			20.8											
27P			20.2											
27S			20.2											
28P			18.6											
28S			18.6											
29P			35.3											
29S			35.3											
206C			21.9											
211P					53.2									
211S					53.2									
212P					53.2									
212S					53.2									
213P							77.2							
213S							63.8							
311C						178	178							
312C						147.2	147.2							
205P								7.4						
26P								2.7						
26S								2.7						
25P									3.7					
25S									3.7					
103C										12.7				
205C											7.4			
205S												7.4		
23P													20.2	
23S														20.2
Totals	761.8	422.2	575.1	761.8	212.8	325.2	466.2	12.8	7.4	12.7	7.4	7.4	20.2	20.2

KONGSBERG

DP Capability Plot

MUBARAK SPIRIT

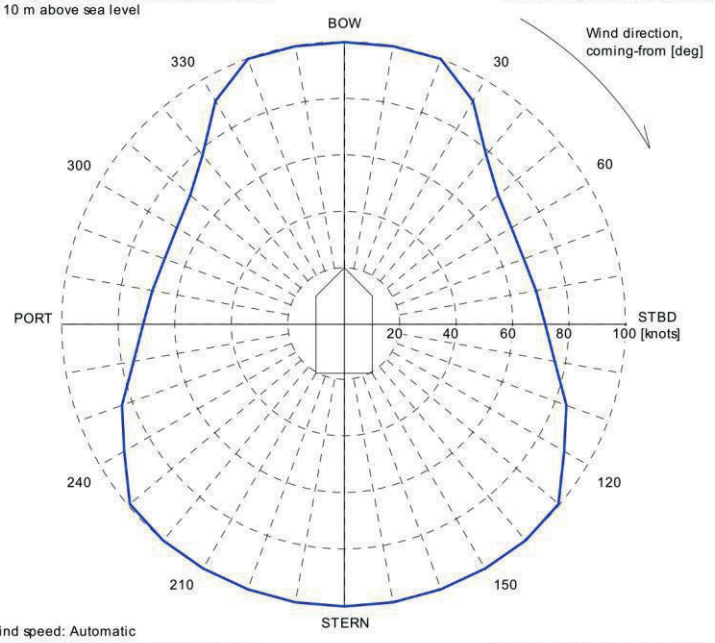
Case number : 1
Case description : Optimum use of all thrusters
Thrusters active : T1-T4
Rudders active :

Version	:	StatCap v. 2.11.1
Input file reference	:	Foot_6452_RevB.scp
Last modified	:	2016-06-01 12.40
Length overall	:	64.8 m
Length between perpendiculars	:	60.0 m
Breadth	:	16.0 m
Draught	:	5.6 m
Displacement	:	4150.0 t (Cb = 0.75)
Longitudinal radius of inertia	:	15.0 m (= 0.25 * Lpp)
Pos. of origin ahead of Lpp/2 (Xo)	:	0.0 m
Wind load coefficients	:	Calculated (Blendermann)
Current load coefficients	:	Calculated (Strip-theory)
Wave-drift load coefficients	:	Database (Scaled by Breadth/Length)
Tidal current direction offset	:	0.0 deg
Wave direction offset	:	0.0 deg
Wave spectrum type	:	JONSWAP (gamma = 3.30)
Wind spectrum type	:	NPD
Current - wave-drift interaction	:	OFF
Load dynamics allowance	:	1.0 * STD of thrust demand
Additional surge force	:	0.0 tf
Additional sway force	:	0.0 tf
Additional yawing moment	:	0.0 tf.m
Additional force direction	:	Fixed
Density of salt water	:	1026.0 kg/m³
Density of air	:	1.226 kg/m³ (15 °C)
Power limitations	:	ON
Thrust loss calculation	:	ON (ABS)

#	Thruster	X [m]	Y [m]	F+ [tf]	F- [tf]	Max [%]	Pe [kW]	Rudder
1	AZIMUTH	-30.0	-3.9	43.7	-43.7	100	2352	
2	AZIMUTH	-30.0	3.9	43.7	-43.7	100	2352	
3	TUNNEL	25.1	0.0	14.2	-14.2	100	825	
4	TUNNEL	22.4	0.0	14.2	-14.2	100	825	

VARIABLE WIND AND WAVES
Limiting 1 minute mean wind speed in knots
at 10 m above sea level

SKP = 100.
SKP are subject to ABS approval



Wind speed: Automatic
Significant wave height: IMCA (North Sea)
Mean zero up-crossing period: IMCA (North Sea)

Rotating tidal current: 1.50 knots
Rotating wind induced current: 0.000*Uwi knots

KONGSBERG

DP Capability Plot

MUBARAK SPIRIT

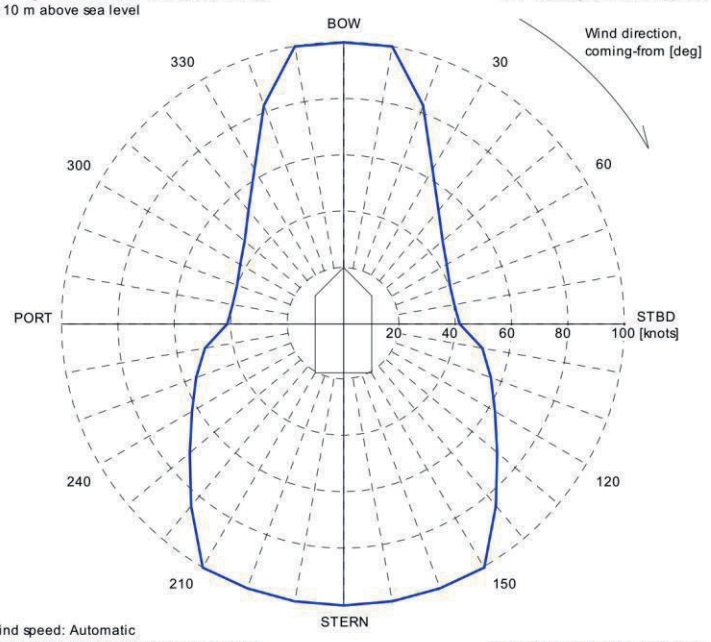
Case number : 4
Case description : Worst single failure, loss of Bus B
Thrusters active : T1-T2, T4
Rudders active :

Version	:	StatCap v. 2.11.1
Input file reference	:	Foot_6452_RevB.scp
Last modified	:	2016-06-01 12.40
Length overall	:	64.8 m
Length between perpendiculars	:	60.0 m
Breadth	:	16.0 m
Draught	:	5.6 m
Displacement	:	4150.0 t (Cb = 0.75)
Longitudinal radius of inertia	:	15.0 m (= 0.25 * Lpp)
Pos. of origin ahead of Lpp/2 (Xo)	:	0.0 m
Wind load coefficients	:	Calculated (Blendermann)
Current load coefficients	:	Calculated (Strip-theory)
Wave-drift load coefficients	:	Database (Scaled by Breadth/Length)
Tidal current direction offset	:	0.0 deg
Wave direction offset	:	0.0 deg
Wave spectrum type	:	JONSWAP (gamma = 3.30)
Wind spectrum type	:	NPD
Current - wave-drift interaction	:	OFF
Load dynamics allowance	:	1.0 * STD of thrust demand
Additional surge force	:	0.0 tf
Additional sway force	:	0.0 tf
Additional yawing moment	:	0.0 tf.m
Additional force direction	:	Fixed
Density of salt water	:	1026.0 kg/m³
Density of air	:	1.226 kg/m³ (15 °C)
Power limitations	:	ON
Thrust loss calculation	:	ON (ABS)

#	Thruster	X [m]	Y [m]	F+ [tf]	F- [tf]	Max [%]	Pe [kW]	Rudder
1	AZIMUTH	-30.0	-3.9	43.7	-43.7	100	2352	
2	AZIMUTH	-30.0	3.9	43.7	-43.7	100	2352	
- 3	TUNNEL	25.1	0.0	14.2	-14.2	100	825	
4	TUNNEL	22.4	0.0	14.2	-14.2	100	825	

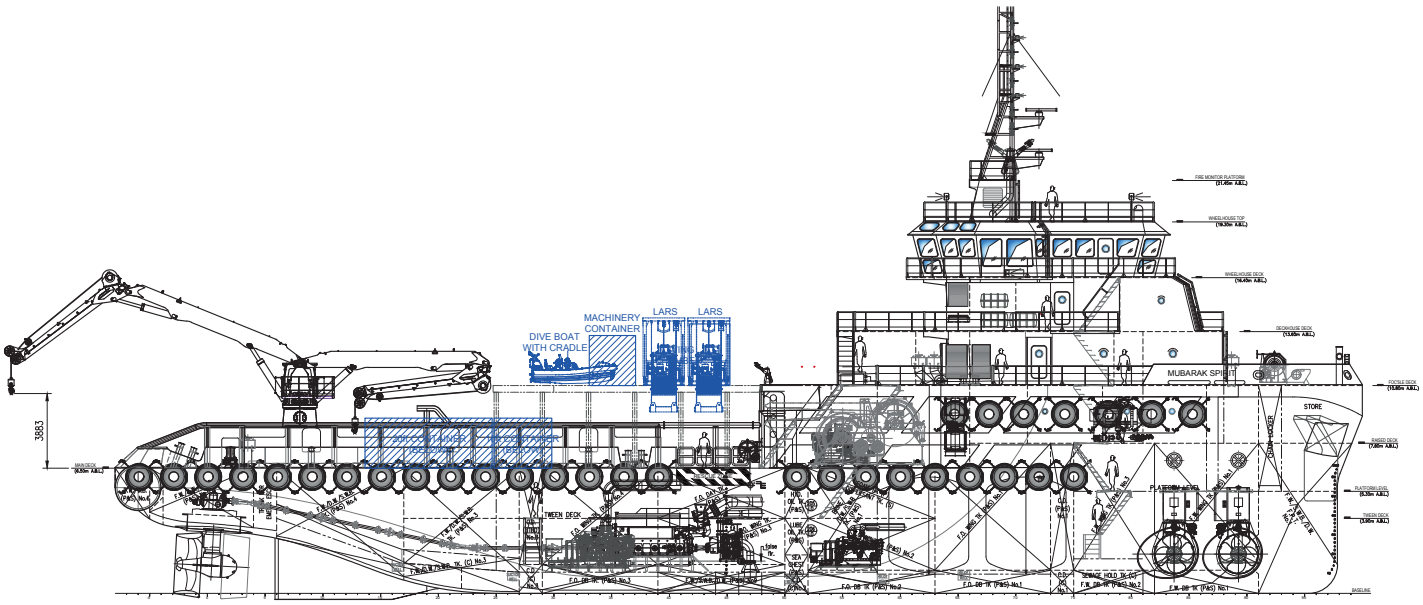
VARIABLE WIND AND WAVES
Limiting 1 minute mean wind speed in knots
at 10 m above sea level

SKP = 99.
SKP are subject to ABS approval

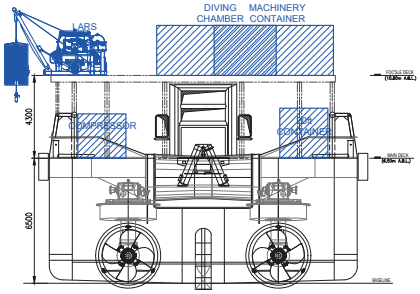


Wind speed: Automatic
Significant wave height: IMCA (North Sea)
Mean zero up-crossing period: IMCA (North Sea)

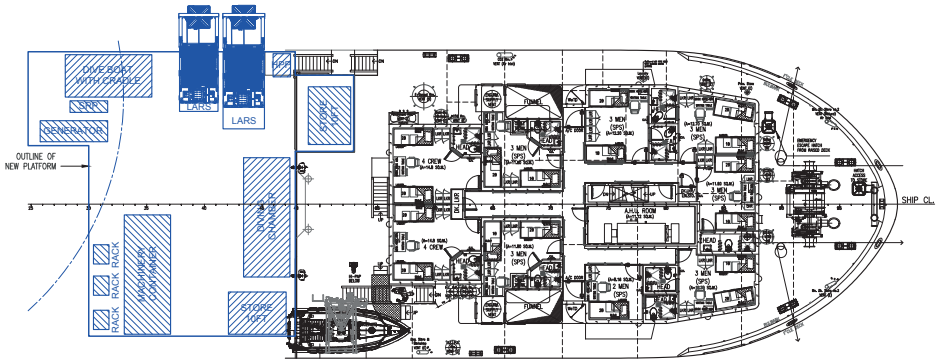
Rotating tidal current: 1.50 knots
Rotating wind induced current: 0.000*Uwi knots



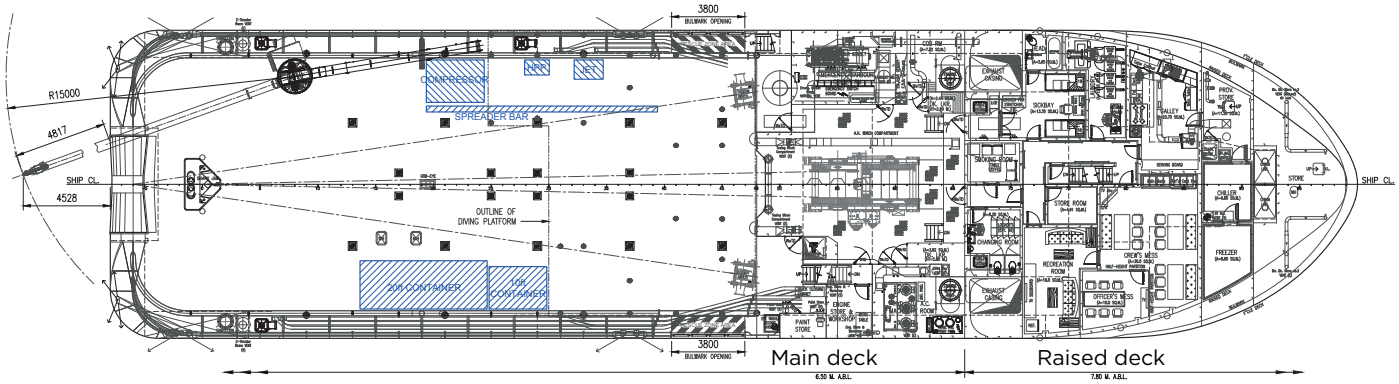
Profile



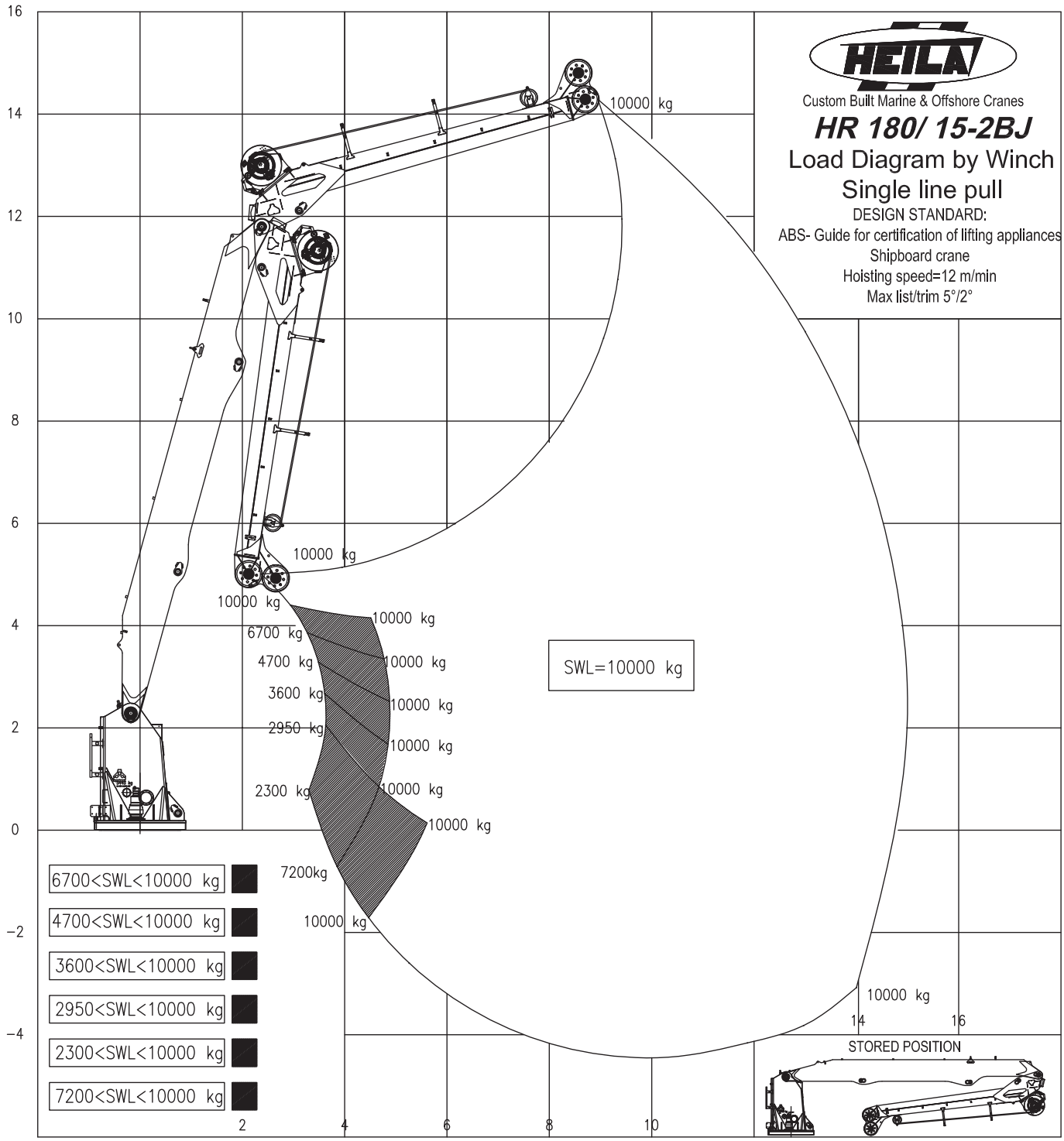
Aft view



Diving platform | Forecastle deck



Main deck | Raised deck



Mubarak Marine LLC | PO Box 7220 | Dubai Maritime City | UAE
T+971 4 586 5200 | F +971 4 586 5299 | marketing@mubarak.ae | mubarakmarine.com

Revision July 2022 | All technical details are provided as a guide only and are subject to owner's changes without notice