

AFRICAN CONCEPT - MT 6017 Mk II



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The vessel is a Multi-purpose field and ROV Support Vessel (MRSV) designed to meet the general offshore subsea market. The vessel is specially designed for ROV & crane operations for seabed duties through moonpool or along ship sides. The vessel is equipped with efficient azimuth thrusters and a dynamic positioning system for safe and economic world-wide service.

This specification together with the General Arrangement plan drawing describes an offshore support vessel designed and equipped for subsea operation duties. The design is of type MT 6017 Mk II.

General

With its optimized hull form and bow shape optimized for all weather conditions together with the specified propulsion configuration, the vessel has particularly good seakeeping abilities, station keeping performance and is able to keep a high transit speed.

The vessel with its diesel electric propulsion system and optimized hull lines is designed for low fuel consumption and excellent sea-keeping.

The high focus on reduced fuel consumption means also less emission to the environment.

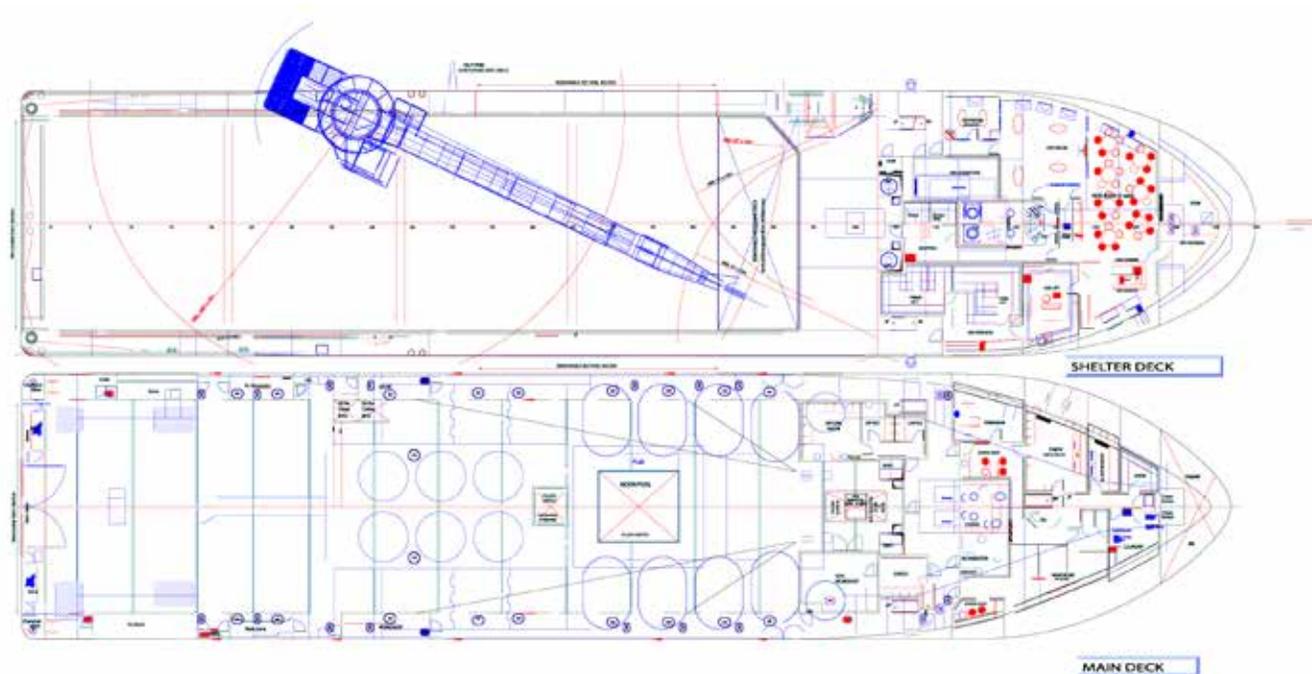
MT 6017 MkII is designed according to the DNV class notation "Clean Class" and "COMF-V rate 3". This in addition to low noise and vibration in hull and superstructure ensure high comfort for the crew and personnel onboard.

The vessel's main services/duties are:

- Subsea Light Construction and Installation work
- Subsea Light Maintenance work
- Subsea Inspection work

The vessel is fitted with:

- Offshore crane
- Work moonpool
- Removable section of cargo rail (port side)
- Removable stern section
- Mezzanine deck (removable)
- Helideck
- High standard accommodation for 68 persons with low noise levels



Main Particulars:

Length overall	93.60 m
Length between p.p.	86.60 m
Breadth moulded	19.70 m
Depth main deck	7.85 m
Max. load line draft midship	6.30 m

Capacities: (Approx. values)

Max. deck cargo capacity will occur at draught less than the vessel's max. draught.

Tanks etc.	Capacity 100%	Remarks
Fuel oil	1,185 m ³	
Fresh water	1,009 m ³	
Methanol	214 m ³	
Special Products	214 m ³	
Water ballast/drill water	1,742 m ³	
Dry Bulk products	300 m ³	6 tanks – 2 systems
ORO Capacity	1,455 m ³	
Deck cargo	1,600 T	
Cargo deck area	1,046 m ² (total)	886 m ² (open deck)
Deadweight	4,213 T	

Classification and Regulations:

DNV, A1, Offshore Support Vessel, AMS, Accu, DP2
1966 Loadline Conv., SOLAS, MARPOL.

Nationality:

Nigerian Flag

Performance:

Vessels trial speed at d = 4.5 meter to be approx. 15.5 knots in calm weather and with clean hull. Station keeping: ERN 99.98.98

Heeling pump /system:

One off water ballast heeling pumps, with capacity 1 500 m³/h is installed.

Roll reduction system:

Two off passive roll reduction tanks

Joystick:

Independent Joystick (C-Joy) system for integrated maneuvering control of azimuth propellers and side thrusters is installed.

DP II system:

The vessel is equipped with Kongsberg K-Pos DP-21 DP II (Dynpos AUTR) system according to specified class.

Reference systems:

The vessel is equipped with the following reference systems:

2 x Veripos LD-2 DGPS

1 x HiPap 500 w/long pole

1 x MDL Fanbeam

Sensors:

2 x MRU 5

1 x MRU D

2 x windsensors

1 x deepwater echosounder (4000 m)

3 x Gyro compasses

The vessel is also equipped with Anthea speed log

Navigation system:

The vessel is equipped with an integrated bridge system according to specified requirements and regulations.

Communication system:

Communication equipment according to GMDSS requirements for Area 3 operation with equipment duplication and shore maintenance utilized to assure availability and sufficient internal communication systems is installed.

Safety Equipment:

The vessel has safety equipment according to SOLAS and flag state requirement.

6 off 35 person life rafts (A pack)

One off FRC with el. Hydraulic davit, SOLAS approved; classed as MOB

Accommodation:

The vessel has accommodation and equipment for 68 persons.

Three (3) off Single Cabins – State cabin

Thirteen (13) off Single Cabins – Officer cabin

Twenty-six (26) off Double Cabins – Crew cabin

One off Hospital with 2 beds

Each cabin has direct access to private toilet (shower, WC and wash basin).

All accommodation is fully air-conditioned for world-wide operations based on chilled water system.

Sewage treatment plant is installed.

Helideck:

The vessel is equipped with a helideck, dia. 20.9 m suitable for Sikorsky S-92, holding HCA certification.

Moonpool:

The vessel is fitted with a work moonpool of 6.0 x 5.28 m.

The moonpool is to be fitted with baffle zones in order to get optimized sea damping capability.

Deck machinery:

To prevent oilspill, all mooring equipment is of electrical type.

Two off Mooring winches aft, 10 tonnes each

Two off Windlass with cable lifters, warping ends and drums

Two off Hydraulic Winches Aft

Deck Crane:

Two off Deck/provision crane: 5.0 T - 15 m

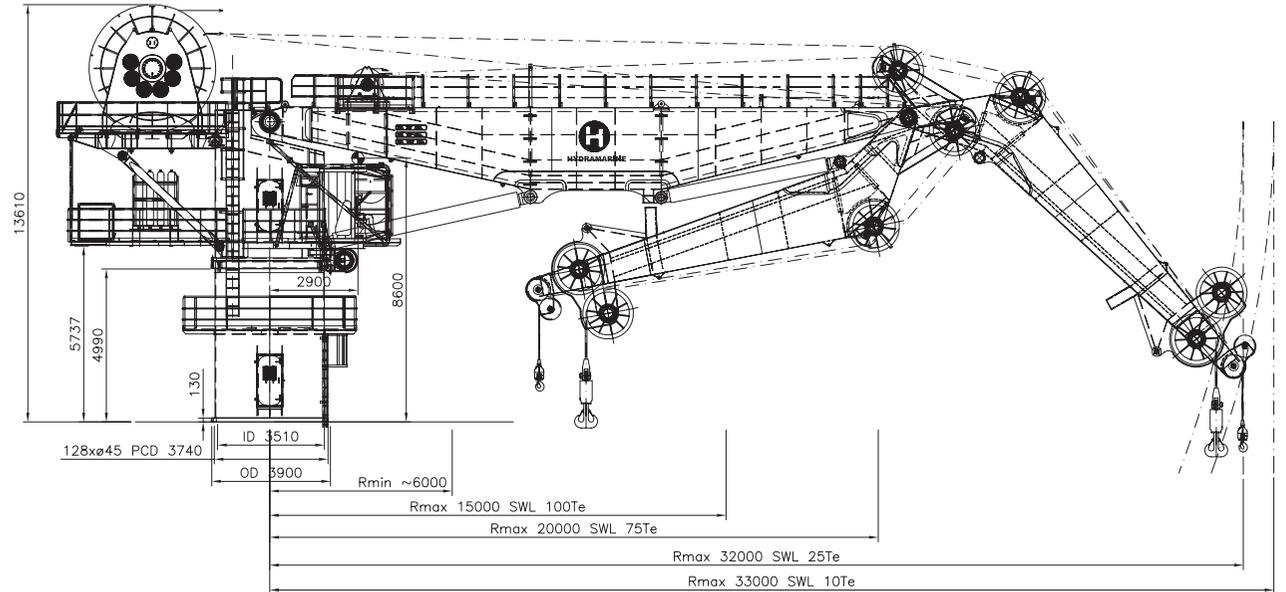
Offshore Crane:

SWL 100 mt. SWL 250 tons main line - 15 m AHC

Whip line SWL 15.0 T - 33 m

Knuckle boom offshore crane. Depth cap. 2000 m

Man riding 1.0 mt. Man riding 10t/40 m on whipline

**Utility Station:**

Connection for the following services are provided:

1 (One) Distribution box Port T11 - 440 V, 60 Hz, 800 A Breaker. Supplied from 1250KVA Transformer 1

1 (One) Distribution box Starboard T12 - 440 V, 60 Hz, 800 A Breaker. Supplied from 1250KVA Transformer 2

1 (One) Container Outlet Box Port T13 - 220 V, 60 Hz, 16 A, 10 (Ten) off 4 Pin Sockets.

1 (One) Container Outlet Box Stbd 14 - 220 V, 60 Hz, 16 A, 10 (Ten) off 4 Pin Sockets

Data cabling for IT hardwire

Telephone, video signals, intercom and P/A

Fire loop

Sea water cooling

Main Propellers:

Two (2) off	Well proven frequency controlled Rolls Royce Azipull azimuth thrusters Power: Approx. 2,200 kW each
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Side Thrusters:

All thrusters are of Rolls Royce make.

Two off	El. driven side thruster forward:	1,050 kW, freq. controlled
One off	El. driven swing-up thruster forward:	883 kW, freq. controlled

Machinery Systems:

Two off	F.O. service tanks
One off	F.O. settling tanks
Two off	F.O. transfer pumps
Two off	W.B. pumps
Two off	F.W. pumps
Two off	F.O. separator, automatic selfcleaning type
Three off	L.O. transfer pump
Two off	Hydraulic oil transfer pumps
Two off	SW cooling pumps for deck equipment

**Generators:**

Generator	Quant.	Capacity eKW	Rpm	Voltage V	Freq. Hz	Prime mover
Main generators	4 (Four)	2100	1800	690	60	Caterpillar 3516
Auxiliary generator	2 (Two)	550	1800	690	60	Caterpillar C18
Emergency generator	1 (One)	185	1800	690	60	Caterpillar C9

Power Available:

1 (One) Distribution box Port	T11 - 440Volt, 60 Hz, 800A Breaker. Supplied from 1250KVA Transformer 1
1 (One) Distribution box Starboard	T12 - 440Volt, 60 Hz, 800A Breaker. Supplied from 1250KVA Transformer 2
1 (One) Container Outlet Box Port	T13 - 220Volt, 60Hz, 16A, 10(Ten) Off 4 Pin Sockets.
1(One) Container Outlet Box Stbd	T14 - 220Volt, 60Hz, 16A, 10(Ten) Off 4 Pin Sockets.

Cooling Systems:

Cooling systems based on central cooling system. One separate cooling system (hull box cooler) for each engine according to supplier's recommendation is installed.

Two off	Starting air compressors
Two off	Starting air bottles
Two off	Working- /instrument air compressor
Two off	Bilge pumps
Three off	Fire pumps
One off	Bilge water separator
	Water mist fire fighting system in engine room, incenerator room an gallery.

Electrical System:

Alternating current system, 3 phase, 60 Hz for the general el. system according to DIN and /or IEC norms.

System voltages: 690V AC, 440V AC, 230V AC and 24V D

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690V AC, 440V AC, 230V AC and 24V D





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