

# Maersk Viking

Ultra deepwater drilling  
and development

Deepwater Advanced



# Maersk Viking

**TYPE**

Samsung 96K drillship

**BUILT**

Samsung Heavy Industries, 2014

**CLASS**

American Bureau of Shipping

**FLAG**

Singapore

**WATER DEPTH**

3,600 m (12,000 ft)

Maersk Drilling is a considerable player in the ultra deepwater market with four newbuilding drillships and three ultra deepwater development semi-submersibles.

The design and capacities of the drillships include features for high efficiency operation. Featuring dual derrick and large subsea work and storage areas, the design allows for efficient well construction and field development activities through parallel and offline activities.

Special attention has been given to the safety on board. Equipped with Multi Machine Control on the drill floor the large degree of automation ensures a safe operation and consistent performance.

---

## Main advantages

- Multi Machine Control to allow all standard operations such as stand building and tripping to be conducted without personnel on the drill floor. This ensures a high level of safety as well as consistency across crews
- Uptime and efficiency are maximized through dual pipe handling. While one string is working in the main well centre a second string of e.g. casing, drill pipe or bottom hole assembly in the auxiliary well centre can be either assembled and racked back in the setback area for later use in the main well centre or disassembled and laid out on the deck
- Dual mud system ensuring efficient change between mud types and completion fluids. Increased mud storage capacity
- The travelling system; crown sheaves, travelling block and main well centre top drive is rated for 1,250 tons enabling a total drilling depth of up to 40,000 ft. The equipment is fully interchangeable
- Dedicated guided gantry cranes for BOP and subsea trees handling
- Minimize overhead crane activity; Fork-lift access on several decks
- Riser inspection/maintenance basket allowing access to all risers
- Gas handler for safe evacuation through choke of gas trapped in marine riser
- Prepared for 2<sup>nd</sup> BOP. Dedicated BOP pod workshop
- Large accommodation for 230 people and considerable storage and tank capacities for long range and extended time operational capabilities
- Black out recovery less than 10 sec
- Optimised fuel consumption. Five percent less fuel consumption in main load area

# Main particulars

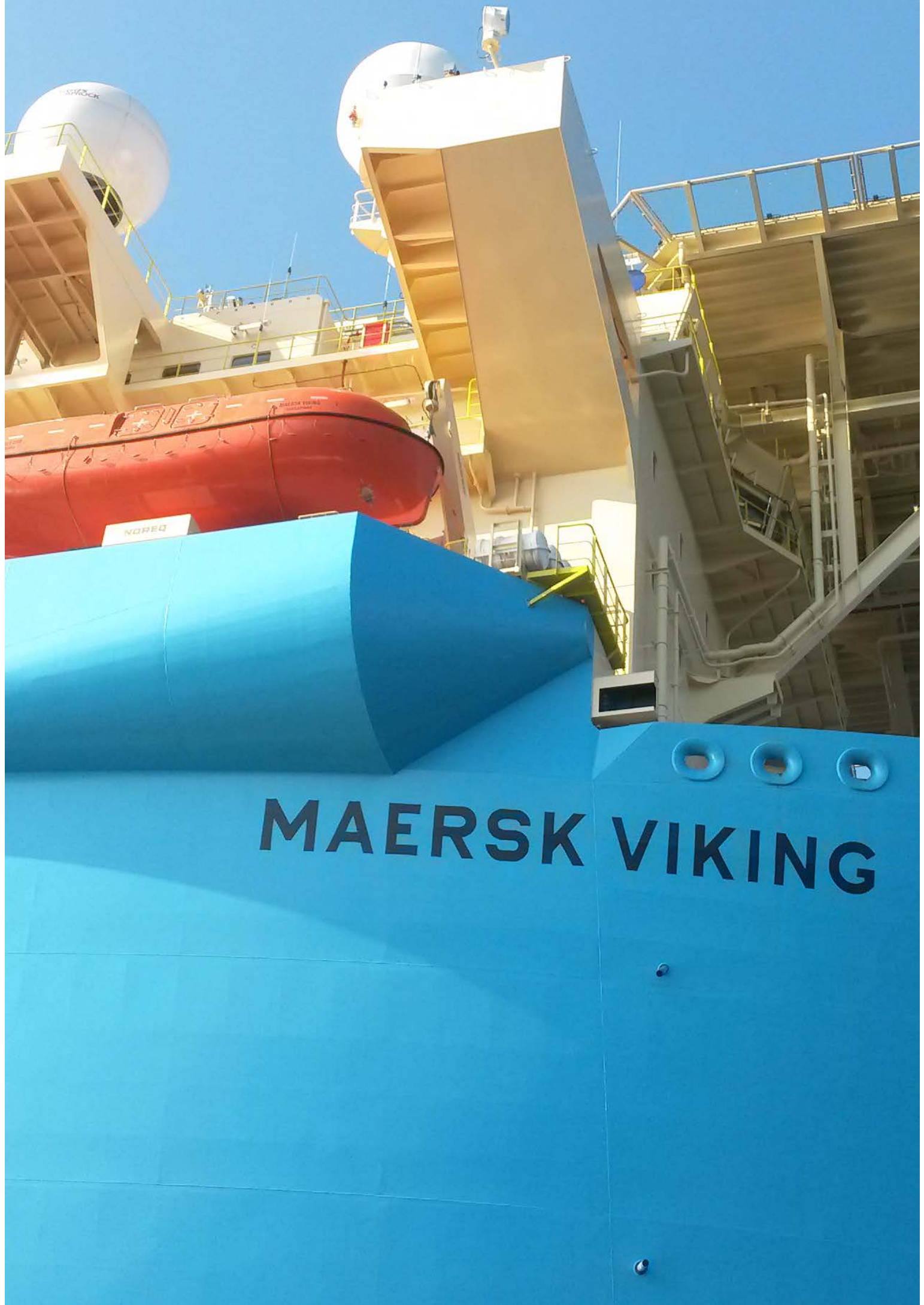
DIMENSIONS	IMPERIAL	METRIC
Length overall	748 ft	228 m
Width overall	138 ft	42 m
Depth	62 ft	19 m
Moonpool opening	84 ft x 41 ft	25.6 m x 12.5 m

PARTICULARS	IMPERIAL	METRIC
Rated drilling depth	40,000 ft	12,000 m
Displacement operational	211,650,000 lbs	96,000 t
Displacement transit	146,600,000 lbs	66,500 t
Total payload (max/transit)	44,100,000 lbs / 36,350,000 lbs	20,000 t / 16,500 t
Riser tensioner load	3,600,000 lbs	1,633 t
Vertical DP/CS6 setback load	2,650,000 lbs	1,200 t
Horizontal riser rack area	135 x 90 ft	135 x 27,4 m
Horizontal pipe rack area	17,000 ft <sup>2</sup>	1,600 m <sup>2</sup>

WEATHER / DESIGN CRITERIA (SURVIVAL)	IMPERIAL	METRIC
Water depth	12,000 ft	3,600 m
Wind speed	100 knots	51.5 m/sec
Wave height	47 ft	14.4 m
Wave period	17 sec	17 sec
Surface current	1.1 knots	0.6 m/sec

CAPACITIES	IMPERIAL	METRIC
Drill water	84,755 ft <sup>3</sup>	2,400 m <sup>3</sup>
Potable water	42,377 ft <sup>3</sup>	1,200 m <sup>3</sup>
Fuel oil	211,888 ft <sup>3</sup>	6,000 m <sup>3</sup>
Brine	26,486 ft <sup>3</sup>	750 m <sup>3</sup>
Base oil	34,961 ft <sup>3</sup>	990 m <sup>3</sup>
Liquid mud (active)	6,030 bbl	960 m <sup>3</sup>
Liquid mud (reserve)	5,980 bbl	950 m <sup>3</sup>
Bulk mud	15,962 ft <sup>3</sup>	452 m <sup>3</sup>
Bulk cement	15,962 ft <sup>3</sup>	452 m <sup>3</sup>
Waste mud (slop tank)	16,880 ft <sup>3</sup>	480 m <sup>3</sup>
Accommodation	230 people	230 people





**MAERSK VIKING**

# Key features

## MULTI MACHINE CONTROL

The drillships feature Multi Machine Control (MMC), a computerized control system, which together with a fully remote operated pipe handling system allows all standard operations such as stand building and tripping to be conducted without personnel on the drill floor, thus ensuring a high level of consistency across the crews. This represents a further development of MMC, first introduced by Maersk Drilling on the ultra deepwater semi-submersible now in operation. Duplicate equipment on both well centres adds redundancy to the operation. There are two operator chairs available for each of the well centres, however, some of the operations can be performed by one man only due to the MMC.

## ACTIVE HEAVE DRAWWORK

Active Heave compensation is provided by 1,250 ton rated active heave compensating drawworks.

## DERRICK AND HOISTING SYSTEMS

The main well centre derrick capacity is rated to 2.5 million pounds. The crown sheaves, travelling block and main well centre top drive is rated for 1,250 tons. This enables a total drilling depth of up to 40,000 ft.

## TUBULAR HANDLING SYSTEMS

Within the derrick setback area, range 2 drill pipe can be racked back in quads or range 3 drill pipe in triples up to 135 ft length. Casing of up to 16" diameter can be racked back in triples. Over 50,000 ft of drill pipe can be racked including a heavy duty drill pipe casing landing string.

## MARINE RISER AND TENSIONING SYSTEMS

In keeping with the safe handling stand building philosophy the rig is equipped with hands free fast make up to 90 ft. long MR 6H-SE riser joints rated for 12,000 ft water depth allowing efficient riser and BOP running. The tensioning system consists of eight dual wire line tensioners giving a total top tension of 3.6 million pounds.

## CRANES/HANDLING SYSTEMS

In addition to the four main hydraulic knuckle boom deck cranes, a dedicated pipe handling crane will cover the drill pipe and casing storage deck and a gantry crane will cover the riser bays and slip joint to ensure safe and efficient handling. Both the BOP and subsea trees will be handled by dedicated guided gantry cranes and carriers.

## WELL CONTROL EQUIPMENT

The 15,000 psi BOP stack is equipped with six ram cavities. The lower ram inverted to allow BOP testing without the requirement to run a test tool and a 27" SHD wellhead connector. The Lower Marine Riser Package [LMRP] has two 10,000 psi rated annulars and high angle release connector. The MUX control system has both copper and fiber communication enhancing redundancy.

## HP MUD SYSTEM

The rig is equipped with five mud pumps rated to 7,500 psi. Max. output for the 5 HP mud pumps with 8" liners and max. speed 105 RPM is 4,800 GPM.

## MUD RETURN SYSTEM

A dual drilling fluid system ensures an efficient change between mud types and completion fluids. Main shakers include automatic Shaker Load Control System. There is a dedicated and separate on line conditioning shaker for reserve mud while circulating on the well and a dedicated and separate completion fluid shaker. Full capacity cuttings blower system and dual trip tanks are also incorporated.

## MUD ACTIVE SYSTEM

Active mud pits and mud mixing system fully split between water based and oil based mud systems with 4 mixing hoppers and five mixing pumps. Including automatic mud chemical additive system and tank washing system for all mud pits.

## POWER MANAGEMENT SYSTEMS

The updated Power Management System has the most efficient Black-out Recovery configuration available today, as proven on Maersk Drilling's ultra deepwater semi-submersibles. This will ensure greatly enhanced overall safety.

## POSITIONING SYSTEMS

The drillship is designed with a DP-3 Dynamic Positioning System, which is the highest class. Additional built in redundancy in critical systems will allow normal maintenance with no or limited impact on the safety and efficiency of the operation. Six 5.5MW thrusters will provide adequate thrust and an increased heading control tolerance.

## ACCOMMODATION

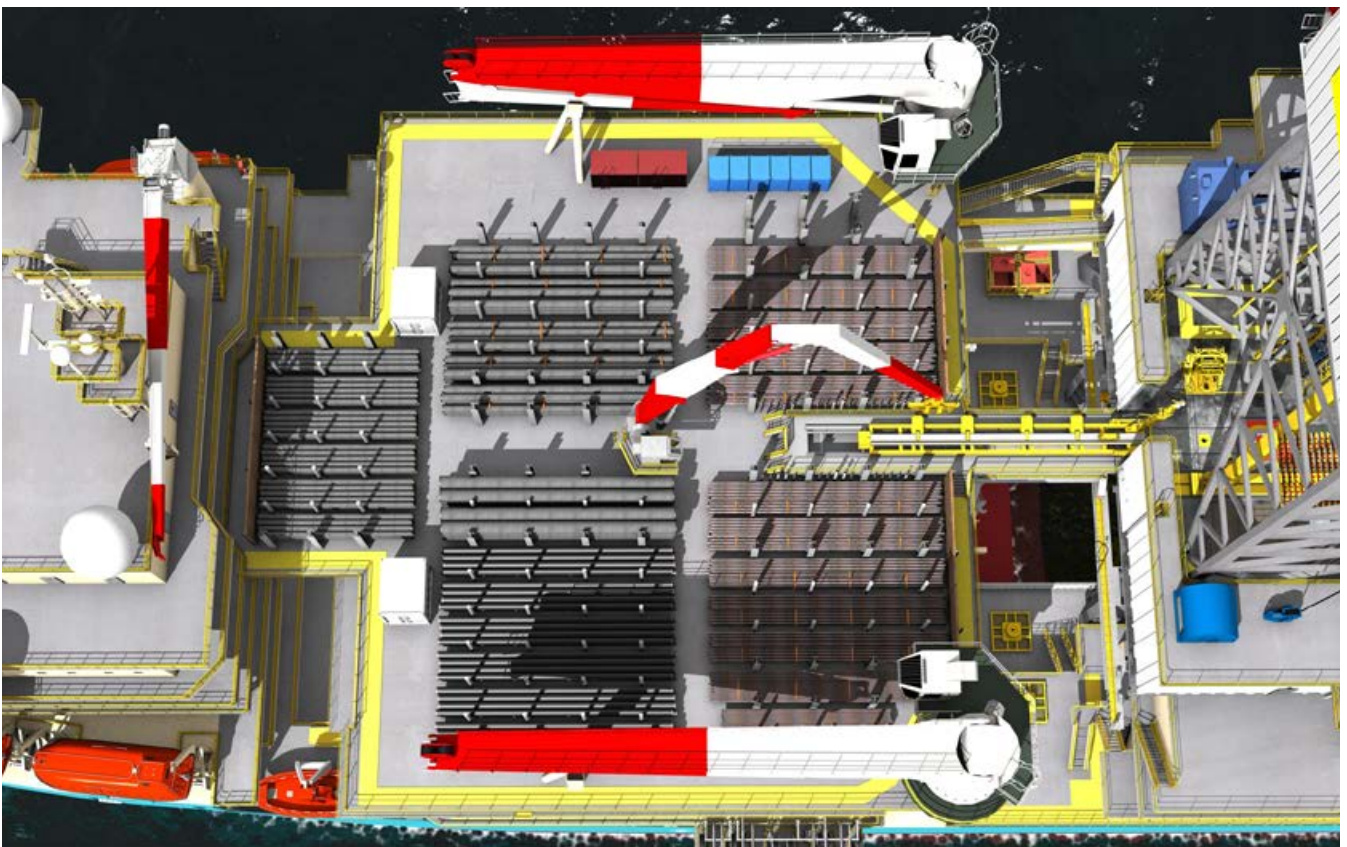
The modern accommodation is laid out for 230 people in one- and two-man cabins. Separation between the busy areas such as offices, mess, galley, change rooms, recreation rooms, cinema, etc. and sleeping areas will further enhance the working environment onboard.



RISER HANDLING GANTRY CRANE WITH SERVICE BASKET FOR INSPECTION AND MAINTENANCE OF RISER CONNECTORS

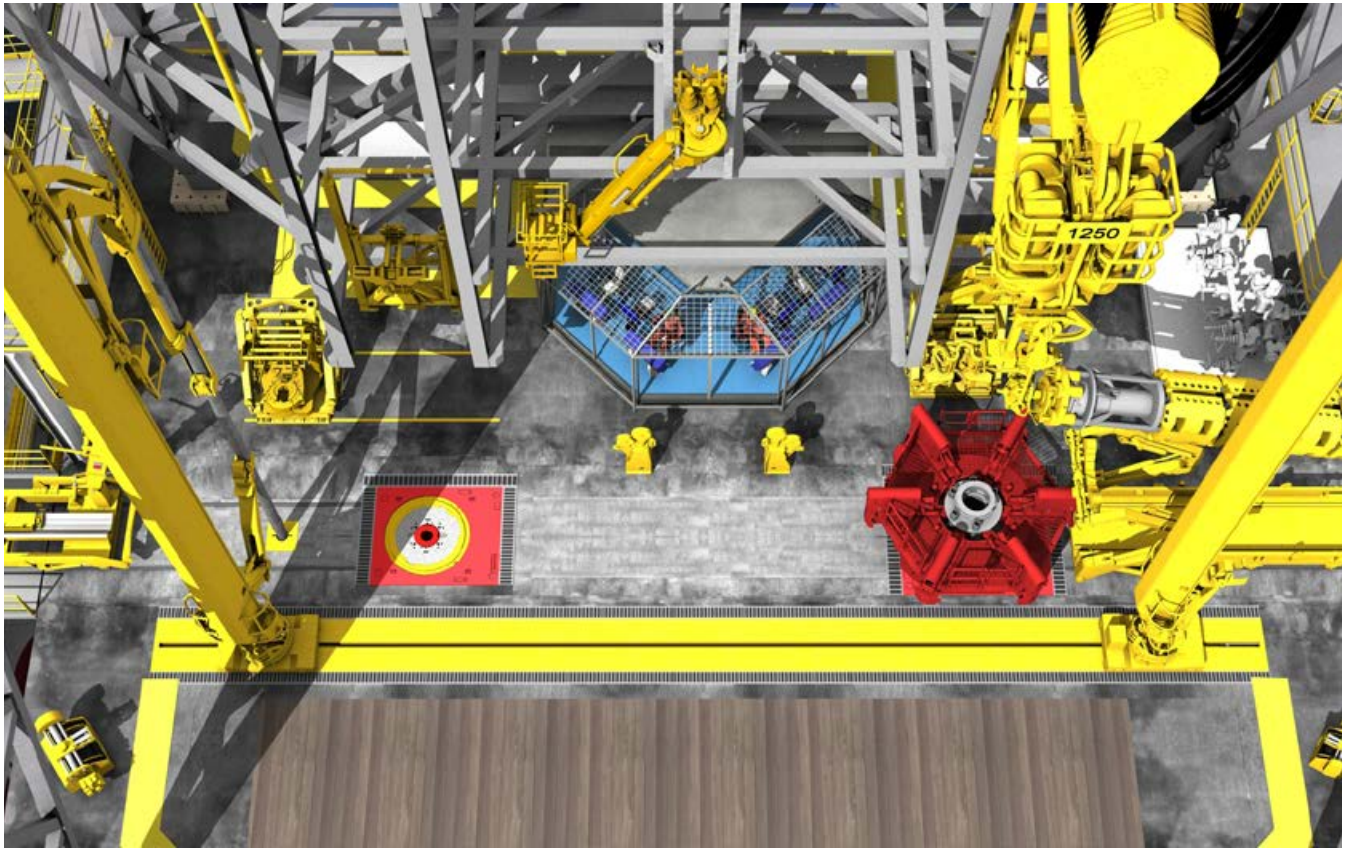


LARGE CAPACITY HORIZONTAL PIPE RACKS WITH DEDICATED PIPE HANDLING CRANE

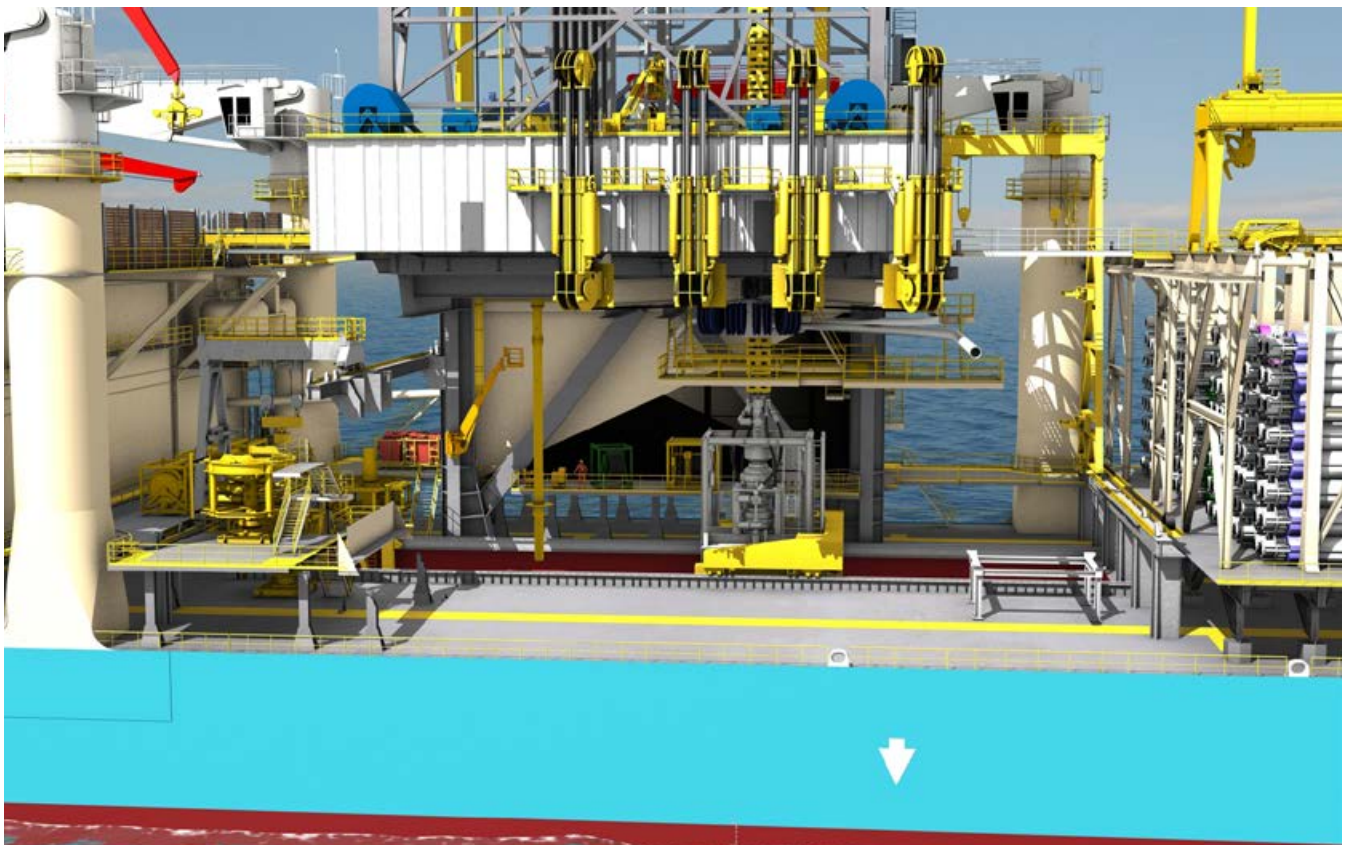




HANDS FREE RISER RUNNING OPERATION



OVERHEAD CRANE FOR HANDLING AND GUIDANCE OF X-MASS TREES



Head office:

**Maersk Drilling**

50, Esplanaden  
1098 Copenhagen K  
Denmark

Telephone: +45 3363 3363

Telefax: +45 3363 3182

E-mail: [copenhagen@maerskdrilling.com](mailto:copenhagen@maerskdrilling.com)

[www.maerskdrilling.com](http://www.maerskdrilling.com)

**Follow us to learn more**

 [www.maerskdrilling.com](http://www.maerskdrilling.com)

 [www.facebook.com/MaerskDrilling](https://www.facebook.com/MaerskDrilling)

 [www.linkedin.com/company/maerskdrilling](https://www.linkedin.com/company/maerskdrilling)

 [www.twitter.com/maerskdrilling](https://www.twitter.com/maerskdrilling)

 [www.vimeo.com/maerskdrilling](https://www.vimeo.com/maerskdrilling)

 [www.youtube.com/user/Maerskcom](https://www.youtube.com/user/Maerskcom)

 [www.instagram.com/maerskdrilling](https://www.instagram.com/maerskdrilling)

"DISCLAIMER: This brochure is for promotional purposes only. All descriptions, specifications and other information contained in this brochure and/or in any accompanying material is: (i) intended to give only a general indication of the sorts of service or equipment or performance that might be available (ii) intended to be no more than an invitation to treat (iii) subject to contract and possible change or alteration at our discretion and without notice to you (iv) not to be relied upon by you for any purposes whatsoever when entering into any legally binding agreement with us."