CHIKYU

Nagasaki Shipyard. CHIKYU is designed to perform drilling operations in maximum 2,500 m of water. CHIKYU has drilled several deepwater hydrocarbon wells in addition to the scientific drilling operations.

DESIGN:
JAMSTEC (Japan Agency for Marine-earth Science and Technology)

CLASS:
Class NK, MNS (M), DPS B, Ice Strengthening Class IB

MAIN DIMENSIONS:
Length overall ......................................................... 210.0m
Breadth overall ......................................................... 38.0m
Depth ........................................................................... 16.2m
Operational draft ......................................................... 9.2m
Gross Tonnage .......................................................... 56,752 tons
Displacement at loadline ......................................... 59,627 tons
Helicopter deck ......................................................... 230' x 72' x 60', well center spacing 32', 1,250 tons (2,756kips) maximum rated static hook load

STORAGE CAPACITIES:
Fuel oil ......................................................................... 9,301 cu.m
Drill water ..................................................................... 2,554 cu.m
Potable water / Fresh water ........................................... 369 / 369 cu.m
Active mud .................................................................... 560 cu.m
Reserve mud ................................................................. 1,700 cu.m
Bulk cement .................................................................. 697 cu.m
Bulk cement .................................................................. 465 cu.m
Sack storage ................................................................ 200 pallets (size ; 1.2m x 1.2 m x 1m) on 2 tiers

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DRILLING EQUIPMENT:

Drilling control system .............................................. NOV Hitite, DCIS, with three Cyberbase operator stations in two driller’s cabins.

Drawworks 1 set
National Oilwell, EH-V-5000, driven by four 750 VDC, 1,185 A motors

Derrick 1 set
Bailey, dual well type booted dynamic derrick, 230' x 72' x 60', well center spacing 32', 1,250 tons (2,756kips) maximum rated static hook load

Traveling block 1 set
Hydraulit, HTB1380, 8 x 78", capacity 1,250 ton

Top drive 1 set
Hydraulit, HPS 1000 2E AC, hoisting capacity 907 ton, continuous torque 90,800 ft-lbs, driven by two 85KMW AC motors, with pipe handler, retractable dolly and rotating parking system.

Rotary table 1 set
Varco BJ, RST 60-1/2, static capacity 1,250 ton, driven by three hydraulic motors.

Pipe raking system 2 sets
Hydraulit, Hydra Racker IV, hydraulic trolley column with three arms.

Coring winch 1 set
National Oilwell, dual drum 19mm x 10,000 m.

Heave compensator 1 set
Hydraulit, CM-1000-25, compensator capacity 518 ton, stroke 25", with active heave compensator.

Riser tensioners 6 sets
Hydraulit, N-line direct acting tensioner, tension capacity 800 kips each, stroke 52'.

BOP equipment 1 set
Vetco Gray, KDFS/CSO, 21" bore, 500 psi WP, 18-3/4" 15,000 psi WP stack

BOP Control System 1 set
Vetco Gray, MUX control system with 5,000 psi WP accumulator system, one hotline and one glycol injection hoses and acoustic backup system.

Riser pipe 2,300 m
Cameron, LoadKing 4.0, 19.5ID x 90", Capacity 4,000 kips, with 4.25ID 15,000 psi WP choker kill lines, 4"ID 7,500 psi WP booster line and 3"ID 5,000 psi WP hydraulic line.

MUD TREATMENT SYSTEM:

Mud management system Procon, system to include operation of pumps, agitators, valves, bulk mud/cement and low pressure mud system and interface to DCIS.

Gumbo separator 2 sets
Brandt, gumbo chain cartridge

Shale shakers 6 sets
Rigtech, VSM300 driven by two 3KW motor with frequency inverter panel.

Mud cleaner 2 sets
Swaco, 8TA/ALSI D-sifter / adjustable linear shaker.

Centrifuge 3 sets
Rigtech, RT HewJet 362, 18" dia. x 64" L bowl, driven by 45KW inverter driven motor.

Degasser 2 sets
Burgress, Magna-Vac Model 1500

CHIKYU, deepwater drillship, was designed by Japanese government for international scientific drilling operations and built by Mitsubishi Heavy Industries and Mitsu Engineering & Shipbuilding. It was commissioned in July 2005 at Mitsubishi Heavy Industries Nagasaki Shipyard. CHIKYU is designed to perform drilling operations in maximum 2,500 m of water. CHIKYU has drilled several deepwater hydrocarbon wells in addition to the scientific drilling operations.