



Stena Forth

Harsh Environment Dynamically Positioned DP Class 3 Drillship with dual-fluid handling capabilities

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GENERAL INFORMATION

RIG TYPE / DESIGN.....	Dynamically Positioned, Harsh Environment DP3 Drillship
CONSTRUCTION SHIPYARD.....	SHI (Samsung Heavy Industries)
YEAR ENTERED SERVICE / SIGNIFICANT UPGRADES.....	August 2009 / N/A
CLASSIFICATION	DNV: + 1A1 Ship-shaped Drilling unit(N) BIS Crane DRILL(N) DYNPOS(AUTRO) E0 F(A, M) HELDK(S, H) Recyclable UKVS
FLAG.....	United Kingdom (UK)
DIMENSIONS	228 m (Long) x 42m (Wide) x 19m (moulded depth)
DRAFTS.....	12m (39.4 ft) operating / 8.5m (27.9 ft) transit
ACCOMODATION.....	220
VARIABLE DECK (OPERATING)...	19,500Mt @12m
TRANSIT SPEED.....	up to 12 knots
MAXIMUM WATER DEPTH	3,000m designed / 2,285m outfitted - Additional Riser Available 10,000 ft designed / 7,500 ft outfitted - Additional Riser Available
MAXIMUM DRILLING DEPTH	10,700m / 35,104 ft *With Offset Setback Standbuilding Capability
HELIDECK.....	Rated for EH-101 and S-92, Equipped with trace heating

DRILLING EQUIPMENT

MAST.....	NOV Dual Hoisting and Drilling Tower - Offline Standbuilding Capability
HOOKLOAD CAPACITY	[MAIN] 1000st static hookload (2,000,000 lbs), upgradeable to 1250st [AUX] 600st static hookload (1,200,000 lbs)
HOIST/DRAWWORKS	[MAIN] Hydraulic NOV Cylinder Hoisting Rig system with emergency lift/boost speed accumulator system Rated to a capacity of 2,300,000lbs - upgradeable to a capacity of 1400st [AUX] Hydraulic NOV Cylinder Hoisting Rig system with emergency lift/boost speed accumulator system Rated to a capacity of 1,200,000lbs
MOTION COMPENSATOR.....	[MAIN] NOV Deadline Compensator with active heave compensation. Rated to 1040kips – upgradeable to 1125st compensated [AUX] NOV Deadline Compensator with active heave compensation. Rated to 800kips
ROTARY TABLE.....	[MAIN] NOV RST 60-1/2", static load rating of 1250st, max torque 57,000ft-lbs [AUX] NOV RST 49-1/2", static load rating of 800st, max torque 47,160ft-lbs
TOP DRIVE	[MAIN] NOV HPS-03 1000, 2 x ABB HXR 450 (LM6) AC-motors (2 x 990HP). 1,000st static load rating, max continuous drilling torque 68,888ft-lb. Upgradeable to NOV TDX 1250 [AUX] NOV HPS-03 750, 2 x ABB HXR 450 (LM8) AC-motors (2 x 1000HP). 750st static load rating, max continuous drilling torque 68,900 ft-lb
TUBULAR HANDLING	Drillfloor: Main and aux well NOV MPT 200 Hydratong Roughnecks, tubular range 3 1/2" to 9 3/4". Maximum make-up/brake-out torque: 140/200kNm respectively. Casing tong KT-7585 data: Jaw range: 2 3/8" to 8 5/8" (inch), Max torque: 25,000 Ft-Lb KT-20000 data: Jaw range 8 5/8" to 20" Max torque 51,800 ft/lbs NOV horizontal pipe handling catwalk machine for single drillpipes, collars and casing. Pipe size range from 2 7/8" to 36" OD, for singles up to 50ft. Setback: Dedicated off-drillfloor pipe racking setback comprising dual NOV HR-IV quadruple stand height vertical pipe racking machines, 3 1/2" to 13 5/8", serving both main and aux wells. 1 x NOV horizontal riser handling catwalk for 80ft riser/slip-joints.
RISER FEED	1 x NOV horizontal riser handling catwalk for 80ft riser/slip-joints.
OFFLINE STANDBUILDING	1 x NOV MPT 200 Hydratong Roughneck, tubular range 3 1/2" to 9 3/4" Casing tong KT-7585 data: Jaw range: 2 3/8" to 8 5/8" (inch) Max torque: 25,000 Ft-Lb KT-20000 data: Jaw range 8 5/8" to 20" Max torque 51,800 ft/lbs NOV horizontal pipe handling catwalk machine for single drillpipes, collars and casing. Pipe size range from 2 7/8" to 38" for singles up to 50ft. 1 x Torque Master; 3-1/2" to 14" Diameter (90 to 355mm) Tailstock 3-1/2" to 18" Diameter (90 to 457mm) Headstock 2-3/4" to 13-1/4" Diameter (70 to 336mm) Tailstock using extended tong dies 2-3/4" to 17-1/4" Diameter (70 to 438mm) Headstock using extended tong dies
MUD PUMPS	4 x National FC2200 pumps – 7500psi
HP MUD SYSTEMS	Rated for 7,500psi – Dual Fluid System
SOLIDS CONTROL.....	5 x NOV Shale Shakers – Multi Sizer. Flow line camera installed.
DUAL MUD SYSTEM.....	2 WAY FLOW DIVIDER (BRINE) & 5 WAY FLOW DIVIDER (MUD) DOUBLE ISOLATION
MANAGED PRESSURE DRILLING (MPD).....	MPD-Ready upgradeable for Stena Drilling owned MPD System

WELL CONTROL EQUIPMENT

BOP STACKS.....	2 x 6 Ram, 2 Annular, Cameron 18-3/4" 15,000psi TL BOP Stacks <i>Features</i> API S53 Class 7-A2-R5, Wet BOP weight of 660 kips (< 320mT) BOP Footprint 160" x 200", Blind Shear Rams fitted with Tandem Booster Bonnets Upper Annular (LMRP) Hydril 18-3/4" 10,000psi GX Lower Annular (Lower Stack) Cameron 18-3/4" 10,000psi DL Vetco SHD H4 Wellhead Connector 27" (30" adapter kit available)
BOP CONTROL SYSTEM.....	Cameron MKIII Multiplex Primary & Secondary BOP Control Systems. Secondary BOP control system used for offline testing of setback BOP stack (minimising end of well maintenance time). <i>Features;</i> Acoustic and API 17H ROV Intervention Secondary Control Systems Emergency Disconnect, Autoshear & Deadman (AMF) Emergency Control Systems
RISER	Cameron Load King, 3,500kips, 80ft, 21" OD, Flanged Riser & 4.5" ID Auxiliary Lines (Choke, Kill, Hydraulics & Booster) Telescoping Joint with 63ft Stroke and Dual Seal Assembly Subsea Services Remotely Operated Pull-in System (ROPS) (providing efficient hands free connection and disconnection of coflexip hoses).
RISER TENSIONER	6 x 600kip, NOV N-Line Direct Acting Tensioners <i>Features;</i> 48.5ft stroke, Riser Anti-Recoil System
CHOKE MANIFOLD	Cameron 3-1/16" 15,000psi Choke Manifold <i>Features;</i> 3-1/16" 15,000psi Inlet / 4-1/16" 10,000psi Outlet 2 x 15,000psi Hydraulic Chokes, 2 x 15,000psi Manual Chokes HDI Choke Control System
DIVERTER.....	GE KFDS-CSO 500psi WP Diverter <i>Features;</i> Designed for 60.5" Rotary Table, Diverter Housing is 59" ID 21-1/4" Packer ID, Pressure Rating of 500psi in Complete Shut Off (CSO)
TREE STORAGE & HANDLING	1 x NOV X-Mas Tree Gantry Crane, 264kips (120mT) Capacity 1 x NOV X-Mas Tree Trolley, 264kips (120mT) Capacity 4 x NOV X-Mas Tree Skids, 264kips (120mT) Capacity
MOONPOOL	84ft x 41ft (25.60m x 12.48m)

POWER MANAGEMENT & MACHINERY

MAIN POWER	6 x Wartsila 16V32C diesel engines rated at 7.68 MW driving 6 x ABB AMG 1120MR10 LSE alternators rated at 7.4 MW
EMERGENCY POWER	6 x Main power generators each capable of operating as designated emergency generator rated at 7.4 MW with automatic change-over function from main switchboards to supply ABB Unigear 11 kV emergency switchboard.
POWER DISTRIBUTION.....	3 x ABB Unigear 11 kV switchboards with ABB REM 543 protection relays supplying 690 V, 440 V and 220 V distribution networks and with ABB ACS800 air-cooled variable speed drilling drives.

STORAGE CAPACITIES

FUEL OIL.....	10,805 m³ 67,961 bbl	LIQUID MUD	Active: 1,004 m³ 6,315 bbl Reserve: 2,345 m³ 14,750 bbl Total: 3,350 m³ 21,065 bbl
BASE OIL	490 m³ 3,082 bbl	BULK CEMENT.....	420 m³ 2,642 bbl
BRINE.....	490 m³ 3,082 bbl [Dual-Fluid Mode 1,183 m³ 11,532 bbl]	BARITE	315 m³ 1,981 bbl
DRILL WATER	4,464 m³ 28,079 bbl	BENTONITE	105 m³ 660 bbl
POTABLE WATER.....	2,052 m³ 12,910 bbl	SACK STORAGE....	250 tonnes 7,500 sacks

STATION KEEPING – PROPULSION SYSTEMS

THRUSTERS.....	6 x Rolls Royce UUC-455, variable speed, fixed pitch, 360° azimuthing thrusters driven by 6 x ABB ACS6000 5.5MW water-cooled variable speed drives.
DP SYSTEM	Kongsberg K-Pos DP-32 dual redundant control system and K-Pos DP-12 backup control system with 2 x HIPAP, 1 x HAIN, 3 x DGPS position reference systems.
MOORING SYSTEMS	2 x 12.675 Mt Anchors

CRANES

CRANES	3 x NOV Knuckle Boom Cranes, model OC3932KCE 1 fall: SWL 17mT @ 45m radius 5 fall: SWL 85mT @ 17m radius All units personnel handling – upgradeable to 100mT internal lift
BOP HANDLING	BOP overhead gantry crane with 2 x 175mT main winches and 1 x 20mT auxiliary winches. 1 x BOP skid rated to 370mT 2 x LMRP skids rated to 350mT each. Dual BOP/LMRP sea fastening.
RISER HANDLING	Riser overhead gantry crane including riser handling yoke. Crane rated to 2 x 20mT, yoke rated to 2 x 17.5mT
TUBULAR HANDLING	NOV Pipehandling Knuckle Boom Crane, model C2201 PCE Gripper yoke size & Type: 2-7/8" to 20", 3.5mT SWL Without gripper: SWL 14mT @ 17m radius SWL 6mT @ 29m radius

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These specifications are intended for general reference only. Equipment and Specifications are subject to change based on Contractual Status and Customer Requirements. Stena Drilling Limited operates and maintains the equipment in compliance with company policies and procedures.

