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COSL

COSLInnovator



COSL

General discription

The COSLInnovator is a semi-submersible drilling rig designed to operate in water depths up to 750 meter. The unit is designed for North Sea/ Norwegian Sea and world – wide use in harsh environments. Station keeping is maintained by an 8 line mooring system or by dynamic position mode maintained by 6 fixed pitch, variable speed thrusters (DP3).

- Hull — GM4000 design built at Yantai Raffles Shipyard, China
- Drilling structure and mud module — Delivered by National Oilwell Varco/ Nymo, Norway

Classification

- DNV +1A1 Column Stabilized Drilling Unit (N) and Well Intervention Unit (N)
- DRILL (N)
- DYNPOS-AUTRO
- POSMOOR-ATA
- CRANE
- HELDK-SH
- E0
- ECO

Main dimensions

Overall length	104,5 m
Overall width	65 m
Main deck length	81,5 m
Main deck width	65 m
Helideck (diameter)	27,75 m
Moonpool dimensions	21,95 m x 7 m

Draft:

Operating draft	17,75 m
Survival draft	15,75 m
Transit draft	9,2 m

Displacement

Operating displacement	36400 mT
Survival displacement	34700 mT
Transit displacement	26700 mT

Rated water depth — 70 to 750 m. Currently equipped for 500 m

Station keeping

DP system	Kongsberg Maritime SDP-22 + SDP-12 back up
Thrusters	6 x Wärtsila LIPS type FS3500-536 NU
Thruster motors	6 x 3800 kW Siemens H-Compact plus. 0-720 RPM
Mooring	4 double Rolls Royce winches for 90 mm wire

Machinery

Engines	6 x Wärtsila Vasa 12V32, 5110 kW ea, 720 RPM
Generators	6 x Siemens 1DK4536-8AL06-2, 4840 kW ea, 6.6 kV 60 Hz
Emergency power	1190 kW Mitsubishi S12R-MPTA. 1425 kVA Newage Stamford PM734D
Power distribution	690V essential, 440V, 230V

Accommodation — 120 single bed cabins

Safety equipment

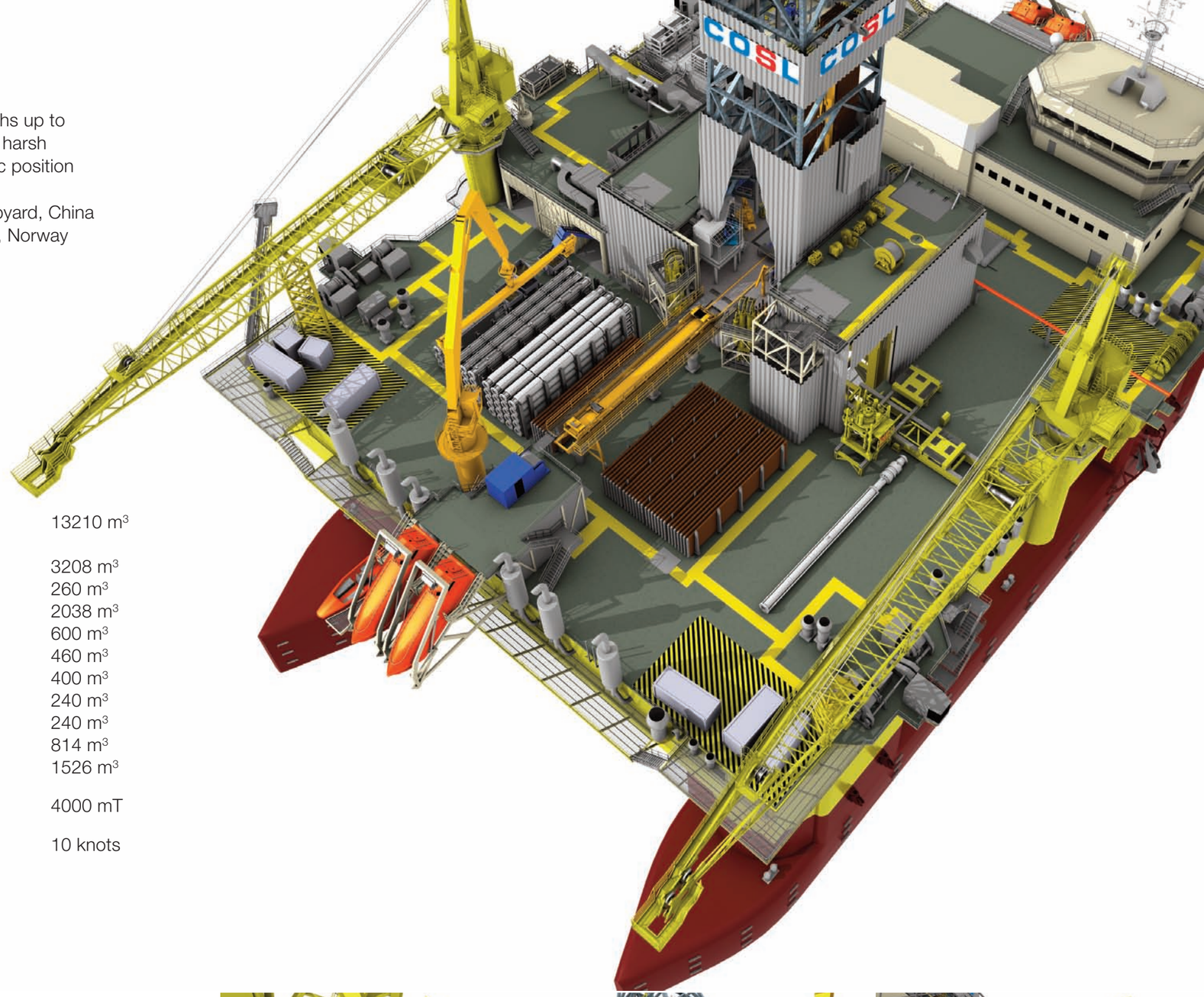
Lifeboats	4 x 60 persons. Free fall lifeboats
Mob boats	2 x Watercraft WHFRB 6.50 DJ
Liferafts	4 x 30 persons

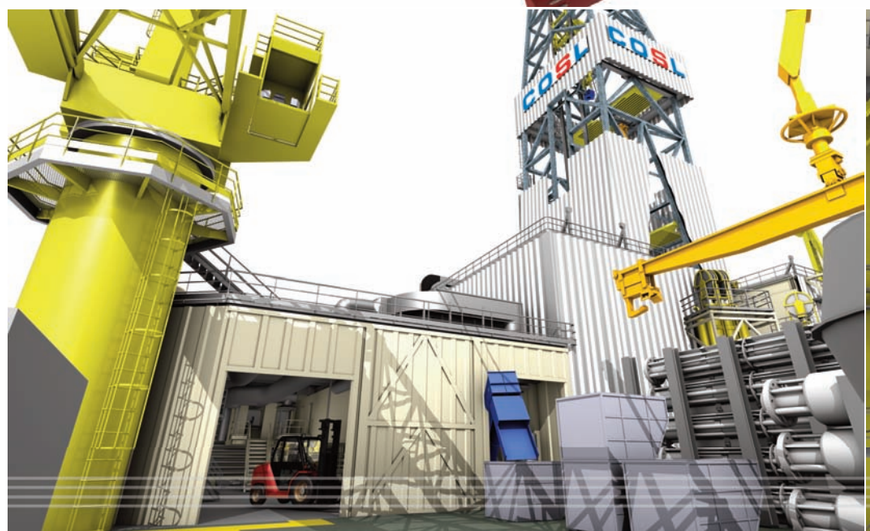
Storage capacities

Ballast water	13210 m^3
Fuel	
- Pontoons	3208 m^3
- Surface	260 m^3
Drilling water	2038 m^3
Potable water	600 m^3
Active liquid mud (surface)	460 m^3
Reserve liquid mud (column)	400 m^3
Bulk Bentonite/Barite	240 m^3
Bulk cement	240 m^3
Base oil storage	814 m^3
Brine storage	1526 m^3

Variable load — 4000 mT

Transit speed — 10 knots













Drilling systems

Derrick	
• Hook load capacity	650 ton (590 mT)
• Base	35 ft x 35 ft (10,7 m x 10,7 m)
• Height (internal)	160 ft (48,8 m)
• Cladding	0-14 m. 4,5 m at fingerbord level
• Racking capacity	7500 m, 270 std 5 7/8” DP + 12 std 9 1/2” DC. Belly board installed
Drawworks	NOV AHD-4600. 4600 hp active heave compensated drawworks
Topdrive	NOV HPS 650-E-AC-SG. 650 ton (590 mT).1000 hp. Max cont. torque: 55250 ft.lbs at 0-96 RPM. Max 180 RPM. Retractable dolly
Rotary	National D-605. 60,5” opening
Traveling/ crown block	60” sheaves for 12 lines.
Drillers control cabin	NOV Cyberbase system with 2 operating stations
Pipehandling system	
• Piperacker	NOV hydraracker HR-III-XY
• Iron roughneck	NOV MPT-200 with mud bucket. 200 KNm break out torque. Range: 2 7/8” – 9 ¾”
• Catwalk machine	NOV PR25-60LS with tail in arm. Fully equipped for tubular and riser handling
• Manipulator arm	NOV DFMA-P-2500. 3 ½” – 9 5/8” gripper head and 47” riser handling head
Crane	
• Platform crane	2 ea NOV Molde crane OC3500LE. Capacity: 80 mT at 20 m. Max radius: 50 m
• Pipehandler crane	NOV Knuckle boom crane with 20” and 30” yoke + riser yoke Capacity: 24,2 mT at 17,7 m. Max radius: 26,6 m.
Mud treatment and supply	
• Mud pumps	3 x NOV HEX 240 pumps. 2540 hp, 3915 l/min, 7500 psi each. Fixed liner size
• Shale shakers	5 x VSM 300 Thule shakers
• Degasser	M-I Swaco CD 1400 degasser
• Mud mixing	NOV fully automated mixing system. Sack slitting machine and big bag slitting machine

Sub sea equipment

BOP/ X-mas tree handling

- 2 x 60 mT overhead crane. STB of Moonpool
- 300 mT BOP elevator system/ main skid
- 300 mT BOP skid. Designed to carry the BOP from parked position to the BOP elevator/ main skid
- 300 mT LMRP skid. Designed to carry the LMRP/ X-mas tree from parked position to the BOP elevator/ main skid
- 100 mT X-mas tree cantilever transport/ skidding system
- 420 mT riser hang-off trolley
- 2 x 15 mT overhead crane. PS of Moonpool

BOP

• BOP stack	Shaffer NXT.18 ¾”, 15K
• Upper ram body	Extended double ram (shear seal & CSG shear) with 22” operators, 5K Poslock operators
• Lower ram body	Triple rams with 14” operators, Ultralock II
• Annular preventer	Shaffer, Wedge Cover Spherical, 10K
• Hydraulic control	Sub Sea Pods for all functions. Alternative acoustic and ROV controls for critical functions. 5K Booster for shear rams. Hydraulic fluid return to surface

Riser

- Shaffer 21” FT-E Riser system
- 50 ft joints
- 2 x 3” ID chokelines, 4” boost line, 2 x 2,3” ID hydraulic return lines
- 500 m riser (50% with buoyancy)

