

Compact Semi-Submersible Drilling Unit

DSME-6000M

for Ultra Deep Sea Operation in
Moderate Environment



DSME, with trust and passion

Design Philosophy

DSME-6000M is a “compact” semi-submersible drilling unit, engineered to provide clients with the best economic solution for exploration and drilling in ultra deep sea environments having moderate sea conditions.

With its unprecedented record of delivering top class semi-submersible drilling units worldwide and vast experience in engineering technologies, DSME has successfully crafted cost optimization into a conventional semi-submersible drilling unit by reducing its size without compromising any essential functional capacity.

In addition to intensive optimization, the DSME-6000M also offers a full range of ultra deep sea operation capabilities as well as sufficient flexibility for customization, making it a compelling proposition for clients seeking low-cost measures.

> Characteristics of unit :

- Stability assessment integrated for safe design, optimal strength and stability
- Highly maneuverable and reliable during operations
- Robust and simple structural configuration with a minimum fatigue sensitive bracing connections
- Low operation and maintenance costs
- High transit speed
- Sufficient deck area for storage



Note - Reference picture of Semi-Rig built in DSME, 2009

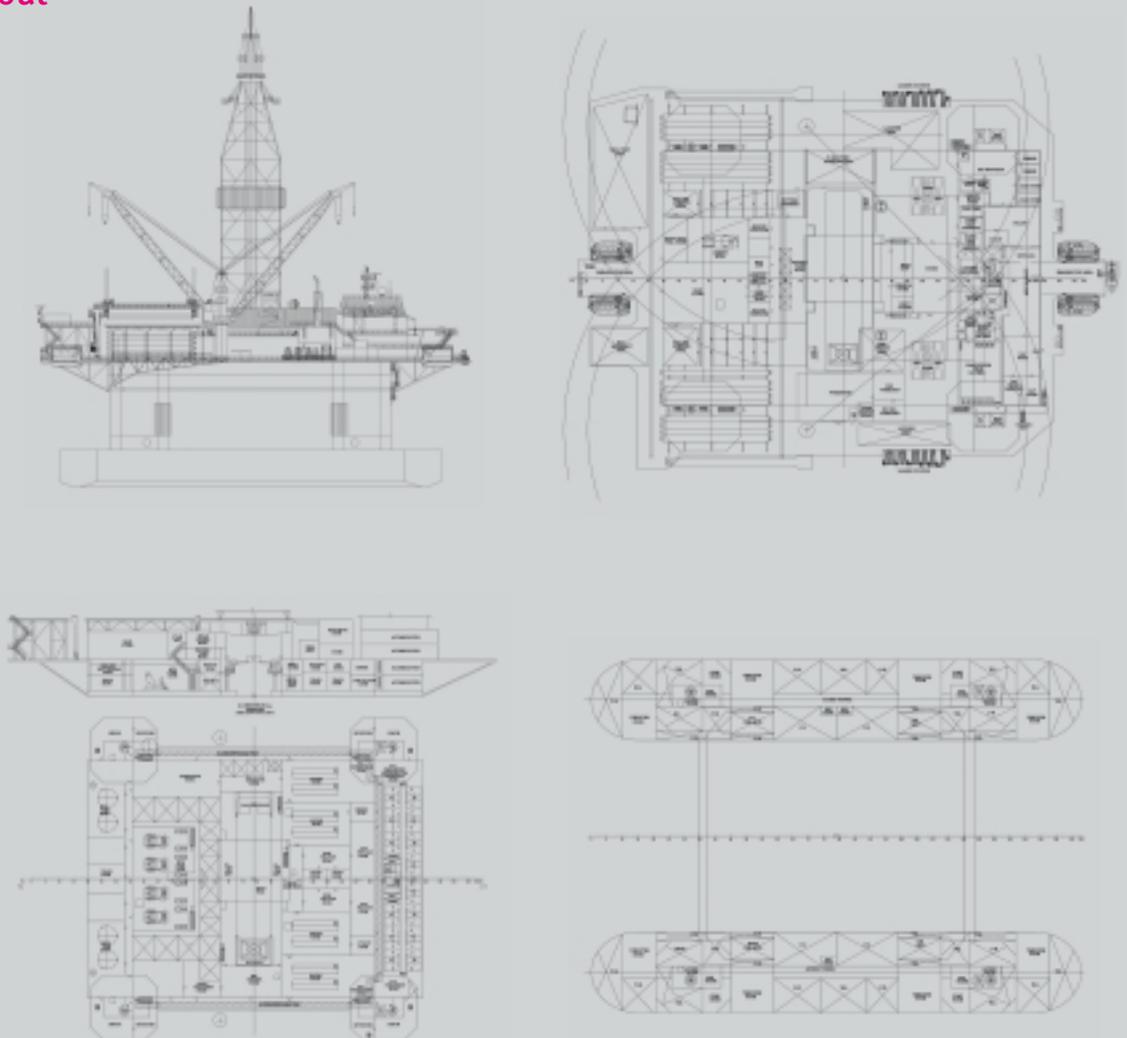


Within its compact arrangement, DSME-6000M facilitates maximum flexibility with regard to various drilling operations through accommodating different drilling facilities, equipment and layouts. Additionally, it possesses dedicated riser storage and spacious pipe racks located on the upper aft deck.

A fully integrated fluid handling system, incorporating segregated mud and brine systems with secondary mud stored in agitated pontoon tanks, increases operational flexibility. A dedicated area for well test equipment is also arranged on the upper deck.



> **Layout**



DSME-6000M

GENERAL

Water / Drilling Depth Classification	8,000 ft / 35,000 ft American Bureau of Shipping (ABS) (映1A1 Column Stabilized Drilling Unit, 映AMS, 映1ACCU, 映DPS-2, CAP437)
Rules and Regulations	IMO, API, SOLAS, MARPOL
Operation areas	Moderate Environment

MAIN DIMENSIONS

Length over all	approx. 115.10 m
Beam over all	approx. 77.70 m
Beam outside pontoons	72.96 m
Height, base line to box bottom	25.00 m
Height, base line to upper deck	33.20 m
Length of pontoon	101.12 m
Beam of pontoon	16.64 m
Height of pontoon	9.60 m

GENERAL DATA

Normal Operation draught	17.00 m
Survival draught	14.50 m
Transit draught	9.30 m
Air gap operation	8.00 m
Air gap survival	10.50 m
Transit Speed	approx. 8.5 knots

OPERATION CAPACITIES

Deck & Column Payload	approx. 6,000 mT
Displacement	
Normal Operation	approx. 38,500 mT
Survival	approx. 36,400 mT
Transit	approx. 30,900 mT

CAPACITIES

Pontoons	
Fuel oil tanks	approx. 2,740 m ³
Potable water tanks	approx. 800 m ³
Mud and other drilling liquids	
Total liquid mud tanks in upper hull	approx. 1,200 m ³
Mud tanks in pontoons	approx. 1,100 m ³
Pontoon brine tanks	approx. 670 m ³
Pontoon base oil tanks	approx. 670 m ³
Drill water tanks	approx. 2,530 m ³
Dry bulk tanks	
Bulk cement	approx. 220 m ³
Bulk bentonite/barite	approx. 360 m ³

LIFE SAVING EQUIPMENT

Lifeboats	4 x 76 men, Conventional type
Rescue Boat	1 x 9 men, Diesel engine
Life Rafts	6 x 25 men, Self inflating

MARINE AND UTILITY SYSTEMS

Main Diesel Generators	8 x 4.32 MW (34.56 MW), 720 rpm, four separate Engine rooms
Azimuth Thrusters	8 x 2.8 MW (22.4 MW), F.W. cooling
Dynamic Positioning	IMO DPS Class 2, 3(Optional)
Cranes	Two Pedestal Cranes, 75 mT SWL at 9.0 to 20.0 m and 30mT at 46.0 m

ACCOMMODATION

POB	150 persons
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ELECTRICAL SYSTEMS

Voltage Rating	11.0 KVAC / 690 VAC / 440 VAC / 230 VAC
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DRILLING AND SUBSEA SYSTEMS

Derrick	Single Derrick, 2,000,000 lbs 46ft x 52 ft of galvanized steel, 64.0 m height
Top drive	908 mT max. hook load, 2 x 850 kW AC motors
Drawworks	Three AC motors : 2,570 kW continuous power
Well control system	BOP Stack 18-3/4"; 15,000 psi
Drill Riser	21"OD, 16.0 ppg mud in 8,000 ft of water
Choke and Kill System	15,000 psi, nominal size : 3-1/16" ID
BOP Control System	5,000 psi electro hydraulic multiplex system
Mud pumps	Four Mud pumps, 2,200hp each 7,500 Psi

