EXMAR STURGEON DRILL SHIP

Purpose of the Design

Drilling in the Caspian Sea requires a unique solution. The river/canal entrances force the units entering to be very restricted in dimensions of beam, draft, length and height. Further, icing closes access to the canals from around October till May. For these reasons, a drill ship entering the Caspian Sea has size restrictions.

	Northern Route	Southern Route
Length	145 m	145 m
Width	17 m	16.5 m
Transit Draft	3.5 m	3.2 m
Air draft	14.5 m	14 m

Additionally, the politics and project economics require that major hardware be capable of being brought out if they are no longer to be used in the Caspian. The STURGEON™ Class Drilling Vessel solves the problems of bringing a modern capabilities deepwater-drilling vessel into and out of the Caspian Sea without welding, cutting and difficult assembly. The vessel is also suitable for offshore operations in other moderate environment areas of the world, such as the Gulf of Mexico, Brazil, West Africa, and Far East.

Design Philosophy

The vessel is designed for stationary operation at a single location. A speed optimized hull form and main propulsion system for ocean-going transit activities are secondary priorities. Hull shape and fore-aft symmetry are important features incorporated in the design to improve the vessel's motion behavior and minimize construction cost.

The drilling system is in general to be a SIMPLE, ROBUST and RELIABLE system designed to carry out the intended operations safely and be easily maintained with the Caspian infrastructure.

The design maximizes the equipment and systems to be built inside the hulls to optimize the transportation into the Caspian Sea and minimizes hook-up time and cost.

Hull(s) Configuration

The STURGEON™ Class Drillship (patent pending) consists of two hulls, which are joined at the centerline when in normal operation. Once the hulls are joined, the resulting vessel characteristics and performance are similar to a conventional dynamically positioned monohull.

The dimensions of the hulls are within the allowable limits of the waterways through which they have to travel to reach the Caspian Sea. The hulls are also designed to assure structural integrity and stability requirements of the composed monohull.

Each hull is constructed with double bottom between the peak bulkheads. A double hull is provided at the outboard shell over the parallel mid-body and at the inside part of each hull to strengthen the structure around the bolt connections between the two hulls.

The two hulls are connected at four longitudinal locations (aft ship, fore ship and two at the moonpool area) by means of a specialized bolting arrangement. At the joining areas, fixed foundations are integrated into the hull structure at the main deck level and at an intermediate level above the lightship waterline. These foundations are bored to receive pre-stressed, hydraulically fitted bolts.

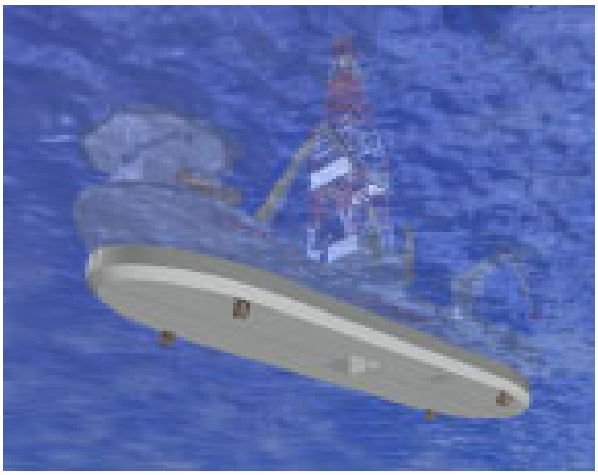
All piping and electrical connections between the hulls are over the main deck. Special sliding foundations are provided for items fitted over and supported on both hulls simultaneously, such as the superstructure.

Construction/Assembly Method

From any international building yard, the hulls can be dry or wet towed. The passage through the rivers and canals in Russia will be in wet tow condition. The superstructure, drilling substructure, derrick and other modules are transported separately or onboard the hulls and will be fitted onboard at the assembly site in the Caspian Sea.

On location, final assembling comprises:

- § Fitting superstructure and shaker house block.
- § Installing cranes and pedestals.
- § Fitting and outfitting of substructure, drillfloor and derrick.
- § Final testing and sea trials.



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EXMAR OFFSHORE COMPANY

EXMAR STURGEON DRILLSHIP
TYPICAL PARTICULARS

HULL (assembled)

MAIN DIMENSIONS

Length Overall	143 m excluding helideck
Beam	29.9 m
Depth	11.0 m
Drillfloor Height	21.0 m
Moonpool	10.2 m x 9.8 m

DRAFT AND DISPLACEMENT

Operating Draft	6.7 m
Operating Displacement	23,600 tonnes
MAIN MACHINERY	
Main Power	6 x 3500 kW
Power Distribution	2 main 6600 VAC buses,
Emergency Power	400 kW

CAPACITIES

Operating Payload	10,000 mt
Sacks	5,000 each
Drill Water	2,000 m^3 (12,500 bbl)
Potable Water	400 m^3 (2500 bbl)
Fuel Oil:	2540 m^3 (15,500 bbl)
Total Bulk	18,000 ft^3
Liquid mud/brine	Active - 3700 bbl,
	Reserve - 2,000 bbl
Ballast	4800 m^3

STATIONKEEPING

Dynamically Positioned	DPS-2 class
Thrusters	4 x 2250 kW thrusters
Positioning	DGPS, acoustics

ACCOMMODATION	100 people
Lifeboats	4 x 50 person
Helideck	S-61