

SAGADRIL-1



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Sagadril 1 (Ex Hakuryu 9) is a Mitsubishi MD T76J-9 self-elevating cantilever jackup drilling rig, jointly designed by Japan Drilling Co., Ltd. and Mitsubishi Heavy Industries. Sagadril 1 was commissioned on August 9th, 1984 at MHI's Hiroshima shipyard.

All the main structural steel elements and super structures for machinery are constructed of low temperature alloy

steel suitable for operations in -20°C ambient temperature. The spud cans, which can be fully retracted into the hull for dry transport, are 11.4 m diameter allowing operations in areas where the seabed is relatively soft. The cantilever design allows the rotary table to be skidded out to a maximum of 45 ft from the transom and 12 ft from the center line.

DESIGN:

Mitsubishi MD T76J-9 self-elevating cantilever jackup drilling rig with three triangular trussed independent legs.

CLASSIFICATIONS HELD:

Nippon Kaiji Kyokai (NK) Classification, NS* Self -Elevating Drilling Unit

American Bureau of Shipping; ✱A1, Self Elevating Drilling Unit

MAIN DIMENSIONS:

Length (molded).....193'57" (59 m)
 Breadth (molded).....183'72" (56 m)
 Hull Depth.....21'58" (6.58 m)
 Leg Length.....421.17'(128.38 m)
 Usable Leg Length (below hull).....361.57' (110.2 m)
 Spud Can Area.....980 sq.ft.
 Cantilever Capacity.....45' x 24'
 Drilling Envelope.....35' x 24'
 Weight(light ship condition).....7,185 tons
 Helideck size/rating.....72' (22 m) dia. /for a AW139

DESIGN CRITERIA:

Max. Operating water depth.....300' with 34.8' air gap
 Max. rated drilling depth.....20,000' with 5" or 5 1/2" drill pipe

STORAGE CAPACITIES:

Fuel oil.....2,732 bbls (434.4 m³)
 Drill water.....4,321 bbls (687 m³)
 Potable water.....1,679 bbls (267 m³)
 Liquid mud.....2,145 bbls (341 m³)
 Bulk mud.....4,600 ft³ (132 m³)
 Bulk cement.....4,600 ft³ (132 m³)
 Sack storage.....5,000 sacks

MAXIMUM GROSS VARIABLE LOAD:

While Drilling.....2,210 tonnes at 45' extension any offset
 Maximum Combined Cantilever load.....1,450 tons (rotary 600tons, hook 600 tons, setback 250 tons)
 Jacking or Towing.....1,200 tonnes

ACCOMMODATION:

Three floors of air conditioned cabins for 100 personnel.

POWER EQUIPMENT:

Main Engines: Four Daihatsu diesel 6DV-22A engines, 1,900 hp x 900 rpm.
 Main Generators: Four Mitsubishi Electric CFC-DP generators, 1,857 KVA at 900 rpm, AC 600V, 60 Hz.
 Emergency Use: One Daihatsu diesel 6DS-19A engine, 650 PS (641 hp) at 900 rpm and one Mitsubishi CFC generator, 500 KVA at 900 rpm, AC 450V, 60 Hz.

DRILLING EQUIPMENT:

Drawworks: National 1320-UE, with an Elmagco 7838W eddy current brake and two 1,000hp DC motors
 Derrick: Emsco-Mitsubishi, 157' high with 30ft x 30ft base, 1,000kips maximum rated static hook load
 Crown Block: Emsco-Mitsubishi, 454tons(1,000kips) capacity, 1 x 52" & 6 x 60" sheaves for 1-3/8" drilling line and 1 x 9/16" sandline sheave.

Travelling Block: National type GA-500 block with unitized hook, 454tons(1,000kips) capacity, 6 x 60" sheaves for 1-3/8" drilling line.

Top Drive: VARCO type TDS-4H, 45,500ft-lbs continuous torque at 110 rpm, 29,100 ft. lbs at 175 rpm. GE752 high torque DC motor, 750V, 1,250 A, 820 kW with soft torque system Mark II.

Rotary Table: Continental-Emsco T-3750, driven by one Mitsubishi Electric 800 hp DC motor.

Iron Roughneck: Forum (Blohm + Voss) / FLOORHAND-100, Electrical-hydraulic driven

BOP & DIVERTER EQUIPMENT:

BOPs & Diverter: One 29-1/2" x 500 psi Hydril MSP diverter.
 One 13-5/8" x 5,000 psi Hydril GK annular.
 One 13-5/8" x 10,000 psi CIW U single ram
 One 13-5/8" x 10,000 psi CIW U double rams

BOP Control System: Sara Sae Model O400T9EA40CE3 accumulator unit with master control panel and auxiliary control panel.

BOP Crane: Dia Kikai 50 tonnes overhead bridge crane fitted with two 25 tonnes hooks.

MUD PUMP & CIRCULATION EQUIPMENT:

Mud Pumps: Two Emsco - Mitsubishi type FB-1600 triplex, each driven by two Mitsubishi Electric 800hp DC motors.

Shale Shakers: Three Derrick 4 Panel Hi "G" dryer, Two Double Life Single Tandem shaker.

Desilters: Two Demco desilters, model 410-H, 800 gpm capacity each, 1,600 gpm total.

Mud Cleaner: One Derrick DP-618 with 2 vibration motor

Mud Centrifuge: One Derrick DE-1000 GBD (Gear Box Drive) centrifuge operates at bowl speeds up to 4000 RPM driven by a 50 HP electric motor .

Degassers: One Derrick Vacu-Flo Degasser Model-1200

OTHER EQUIPMENT:

Cementing Unit: Lease item.

Cranes: Two SH2000SEN Offshore Pedestal Type E, capacity 45.24tons/7.5m (99.73kips/24.60ft), 13.87tons/38.90m (30.57kips/127.62ft)

Water Maker: Two Alfa Laval ORCA Offshore 50 Water Maker with B-10 capable of producing 50.0 m³/day) each side, 100m³/day.total capacity

Anti-pollution Equip: One Sasakura Model SD-12R sewage treatment unit
 One Taiko Kikai Model USH-50 oily water separator, maximum capacity 5,000 liters / hour with 15 ppm oil content or less.

Garbage Compactor DELITEK / DT-500 MK-II