

Lan Jiang

Crane/pipelay vessel



Owner China Offshore Oil Engineering Co. Ltd.
Builder Yantai Raffles
Delivered 1999

Description

Over the years, GustoMSC has been involved in the design and construction of numerous offshore crane and pipelay vessels. A total of 15 crane vessels have been built or converted. The crane vessels have been operating worldwide in various harsh and moderate environments to the satisfaction of their owners and operators.

During the late 1970's GustoMSC developed the first generation semi-submersible crane vessels DB-I 0 I (ex-Narwhal), Balder and Hermod. The design was elaborated to a very detailed level including extensive model testing and approval by ABS.

Lan Jiang

The Lan Jiang is a combination crane and pipelay vessel and capable of laying rigid pipe in up to 150 m water depth. The vessel has been built in 2000/2001 at the Yantai Raffles Shipyard in Shandong, China for the Chinese state oil company CNOOC.

The vessel designed for self-propulsion by two (2) non-retracting azimuthing fixed pitch propellers in nozzles at the stern.

A 12-point mooring system is provided for station keeping of the vessel during offshore construction operations.

The vessel is provided with a 2,500 ton revolving crane located at the stern of the vessel. In tieback mode the lifting capacity is increased to 3,800 tons.

The pipe lay capacity is provided for 4" - 48" pipes including storage facility of 400 - 600 single joints of pipe, a tensioning system of 2 x 75 tons complemented with 165 tons A & R capacity. A fixed truss type stinger is situated at the starboard side of the barge.

Principal dimensions and main particulars

• Length overall	157.5 m
• Breadth moulded	48.0 m
• Depth at side	12.5 m
• Operational draught	8.0 m
• Displacement at scantling draught	54,000 t

Classification

The vessel, including her machinery, equipment and outfitting is designed under special survey of the American Bureau of Shipping to obtain the Class notation:
ABS ⚡A I (P) Heavy Derrick / Lay Barge

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Machinery

Power generation:

- Main diesel generators 3 x 3,200 kW

Propulsion

Provisions have been made for the future installation of two main azimuthing thrusters

Design criteria

Maximum operating conditions pipelaying

- Significant wave height (Hs) 2.5 m
- Wave period (Tp) 6.4 - 8.5 s
- Wind speed, 1 min. sustained (Vw) 30 knots
- Current speed (Vc) 4 knots

Maximum operating conditions lifting operation

- Significant wave height (Hs) 2.0 m
- Wave period (Tp) 6.4 - 8.5 s
- Wind speed, 1 min. sustained (Vw) 30 knots
- Current speed (Vc) 4 knots

Maximum operating conditions standby/abandoning pipe

- Significant wave height (Hs) 12.0 m
- Wave period (Tp) 9 - 12 s
- Wind speed, 1 min. sustained (Vw) 105 knots
- Current speed (Vc) 4 knots

The stinger must be detached during survival conditions.

Transit conditions

The vessel has been designed for unrestricted ocean services, both in stationary and in towing mode.

Water depth

Pipe lay operations can be executed in maximum 150 meters water depth for pipe diameters up to 36". For concrete coated pipes up to 48" the maximum water depth range drops to 100 meters.

Tanks and storage capacities

- Fuel oil MDO 2,000 m³
- Potable water 1,500 m³
- Fresh water 2,600 m³
- Lubrication oil 250 m³
- Ballast water 30,000 m³

Pipe lay capacity

- Work deck area 2,250 m²
- Pipe storage capacity 400 - 600 single joints
- Pipelay capacity (single joints) 4 in - 48 inch
- Tension capacity 2 x 74 t
- A&R capacity I 65 t
- Storage capacity 1,500 m
- Deckload 10 t/m²
- Stinger floating type

Crane capacity

- Mainhoist slewing outreach 2,500 t x 44 m
- Mainhoist fixed over stern outreach 3,800 t x 30 m

Accommodation

Accommodation unit at the stern of the vessel providing spaces for 280 persons

Data presented in this product sheet is for information only. Unit specific specifications as provided by the Owner shall prevail.

