

Hai Yang Shi You 201

DPV7500C - Deepwater crane/pipe-lay vessel

Owner CNOOC Engineering, China

Yard COOEC, China

Delivery 2nd quarter 2010

Description

The DPV7500 is part of the GustoMSC DPV series of deepwater crane/pipe-lay vessels.

The DPV7500 is a DP deepwater combination crane and pipe-lay vessel and capable of laying rigid pipe in up to 2,000 m water depth. The DPV7500 vessel is designed to provide high redundancy meeting DPS-3 requirements enabling crane and pipe-lay operations in the deepwater areas of the China Sea and South East Asia Sea.

The vessel is provided with a 3,500 ton revolving crane located at the stern of the vessel. In tieback mode the lifting capacity is increased to 4,000 tons. Additional lifting versatility is included with 800 tons auxiliary hoist and 700 tons whiphoist.

The pipe lay capacity is provided for single and double jointing systems of 6" - 60" pipes including storage facility of 9,000 tons, a tensioning system of 2 x 200 tons complemented with 400 tons A & R capacity. A fixed truss type stinger is situated at the aft of the vessel incorporating a stinger adjustment system.



Main dimensions

- Length overall 204.65 m
- Length between perpendiculars 185.0 m
- Breadth moulded 39.2 m
- Depth at side 14.0 m
- Operational draught (pipe laying) 7.0 – 8.0 m
- Operational draught (crane lifting mode) 8.0 – 9.5 m

Classification

ABS and CCS

ABS ✕ A1 Pipelay crane vessel (E) ✕ AMS ✕ ACCU ✕ DPS-3

Maximum operating conditions pipelaying

- Significant wave height (H_s) 2.5 m
- Wave period (T_p) 6 – 9 s
- Wind speed 1 hour mean, (V_w) 30 knots
- Current speed, (V_c) 2 knots

Maximum operating conditions Standby / abandoning pipe

- Significant wave height (H_s) 8.2 m
- Wave period (T_p) 11 – 15 s
- Wind speed, 1 hour mean (V_w) 50 knots
- Current speed (V_c) 3 knots

Transit conditions

In transit condition, unrestricted worldwide service is ensured. The service speed is abt 12 knots.



Main tanks and storage capacities

- Fuel oil MDO 5,990 m³
- Fresh water 3,200 m³
- Potable fresh water 270 m³
- Ballast water 32,500 m³

Accommodation

At the bow of the vessel accommodation unit 380 persons

Machinery

Power generation:

- Main diesel generators 6 x 5,440 kW
- Emergency diesel generator 1 x 723 kW

Propulsion and DP

- Main propulsion azimuthing thrusters 2 x 4,500 kW
- Retractable azimuthing thrusters 5 x 3,200 kW

Crane

- Mainhoist slewing 3,500 t x 33 m
- Mainhoist tieback mode 4,000 t x 43 m
- Auxiliary hoist 800 t
- Whiphoist: 1 main 70 t

Pipe-lay systems

- Pipe transfer cranes 2, each 40 t
- Pipe tensioners 2 x 200 t
- A & R winch 400 t
- Pipe storage 9,000 t

- Fixed type stinger with stinger adjustments system
- Main firing line, consisting of:
 - Pipe facing systems
 - Pipe pre-heating systems
 - Five (5) external welding stations
 - Welding control and logging system
 - One (1) shielding gas distribution system
 - Welding convertors
 - One (1) NT and repair station
 - Two (2) Infill stations (12.2m apart)
- Two (2) double jointing prefabrication plants, each consisting of:
 - Pipe facing systems
 - Pipe pre-heating systems
 - One (1) line up system
 - Two (2) external welding systems
 - Once (1) combined external/internal welding system
 - Conveyors
 - Welding convertors
 - One (1) NDT and repair station

GustoMSC services

GustoMSC provided the basic design package, including ABS approval and CCS approval. GustoMSC supplied the main crane.

