De Hoop delivers first of 10 PSVs for Esnaad

State-owned oil company Adnoc, of which Esnaad is a part, recently ordered nine new anchor handlers and already has a total of 10 high spec PSVs under construction in The Netherlands

In July 2015, Esnaad, part of Abu Dhabi National Oil Company (Adnoc), took delivery of the first in a series of platform supply vessels (PSVs) built for it by Shipyard De Hoop in The Netherlands. Production of the vessels is split between De Hoop's facilities in Lobith and Foxhol, with delivery of all 10 vessels due to have been completed in 2017.

The first vessel, *Esnaad 221*, was delivered to Esnaad, the operating company of the Adnoc group, on 15 July 2015. In the meantime, the hull of the second vessel has been launched at Foxhol, and the steel hull of the fourth PSV is currently being assembled on the slipway there. At Lobith, the hull of the third vessel was ready to be launched as this issue of *OSJ* went to press, with the block sections of hull number five being assembled on the second slipway. Steel cutting and construction of the first block sections for the sixth vessel were at an advanced stage.

Adnoc was established in 1971 and operates in all areas of the oil and gas industry in Abu Dhabi. Since it was formed, it has expanded its business activities and become one of the world's leading oil companies with substantial business interests in upstream and downstream activities, including transportation, shipping, marketing and distribution. Today, the company manages and oversees oil production of more than 2.7 million barrels a day, ranking it among the top 10 oil and gas companies in the world. It has a total of 14 subsidiary companies, of which Esnaad is one, and is 100 per cent owned by the group. The company operates from the Mussafah offshore supply base, which is located at the industrial hub of Mussafah, approximately 40km from the city of Abu Dhabi.

Esnaad's new vessels are custom designed to operate at maximum efficiency and reduce operating costs. Although based on previous, proven inhouse designs, the vessels are, said the Dutch yard, "the next step in the evolution of the company's PSV design portfolio" and have an environmental regularity number of 99/99/99/98.

The hullform of the PSVs, with their specially developed bulbous bow, is optimised to reduce (wave) resistance. Testament to the optimised cargo volume with this hull shape is the resulting deadweight – 2,500 tonnes at a draught of 4.85m. Most of this


Esnaad 221 was delivered to Esnaad on 15 July 2015

hull volume is dedicated to a large number of high capacity tanks for various dry bulk and liquid cargoes, such as brine, cargo fuel oil, drilling water and liquid mud. To prevent the liquid slurry from separating, the liquid mud tanks are equipped with agitators. The forward hull – which also accommodates the usual fuel oil, fresh water, sewage, sludge and bilge water tanks – also houses foam and dispersant tanks for fire-fighting and oil spill response.

In addition to liquid cargo, the PSVs will also transport deck cargo on their 515m² work/cargo deck, which is strengthened to 5 tonnes/m². For loading and unloading duties, a fully hydraulic, telescopic boom crane is fitted on the starboard side of the vessels, which has a lifting capacity of 15 tonnes at 2.5m or 0.5 tonnes at 25m outreach.

The external fire-fighting equipment takes the form of two remotely controlled monitors atop the deckhouse that are capable of spraying a water/foam mixture. The PSVs are also fitted with two 6m spray booms, enabling the crew to apply dispersant to the water in case of an oil spill.

In close consultation with the yard, Esnaad opted for diesel-electric propulsion to achieve enhanced flexibility whilst ensuring that the vessels are economical and environmentally friendly to operate. The main generators, feeding the propulsion units and other consumers, are located below deck, in the foreship, beneath the superstructure, in order to accommodate the generators, which are based on relatively large medium speed engines. The propulsors include three tunnel thrusters at the bow and two azimuth stern thrusters to ensure a high level of station-keeping accuracy. This combination also provides a transit speed of 13.5 knots at the lowest possible power requirements.

The high level of redundancy ensures that the vessels will remain fully operational, even with one generator set out of service. Optimal combinations of generators for operational scenarios help to ensure that the vessels will emit very low levels of NOx and have very favourable levels of fuel consumption whether in transit or in dynamic positioning mode.

The superstructure provides accommodation for 28 people, all in cabins with en-suite bathrooms, individually controlled air-conditioning units, radio, television and access to the internet. *OSJ*

BELOW: Construction of Esnaad's new vessels is being split between De Hoop's yards at Foxhol and Lobith

ESNAAD 221

Owner	Esnaad
Designer	De Hoop
Builder	De Hoop
Length oa	70.40m
Length waterline	67.84m
Length bp	65.26m
Depth moulded	6.00m
Draught summer	4.85m
Speed max	13.5 knots
Deadweight 4.85m	2,050 tonnes
Deadweight 3.70m	1,000 tonnes
Deck area	515m²
Fuel oil	660m³
Fresh water	412m³
Drill water	1,028m³
Liquid mud/brine	789m³
Dry bulk	202m³
Foam	26m³
Dispersant	10m³
Lubrication oil	10m³
Propulsion	4 x Wärtsilä of 1,480kW each
Harbour generator	1 x MAN of 238kW
Emergency/ auxiliary generator	1 x MAN of 250kW
Class	LR +100A1, Offshore Supply Ship/Stand-by Ship/Fire-Fighting Ship 1 (2400m³/h) WDL (5t/m²), *IWS, CG, +LMC, UMS, NAV1, IBS, DP(AA), PCR (99)(99), IHM, CAC3, ECO (BWT, CRM, IHM, OW), Green Passport