

Romanian 'Dream 50' concept takes shape

Romanian shipyard Santierul Naval Constanta (SNC) has finalised the basic design for two new fuel efficient 50,000 dwt product tankers to be classed by Germanischer Lloyd (GL).

A letter of intent was signed between SNC and GL during SMM Hamburg. When constructed, they will be managed by Constanta-based Histria Shipmanagement.

Dubbed the 'Dream 50' design, the chemical tankers type II/oil tankers will be built according to the Common Structural Rules (CSR). Should everything go to plan, steel-cutting is scheduled for early 2013.

SNC's 'Dream 50' has been optimised for shallow draft, without compromising the mild steel content and scantlings, the shipyard said. High tensile steel content will amount to nearly 30%, while the deadweight on 11 m draft will be 39,950 tonnes and on 12.8 m draft, the deadweight will go up to 49,900 tonnes.

The hull forms were designed in order to achieve maximum cargo intake while avoiding any unnecessary depth increase, resulting in a tank capacity, including slops and retention, of 56,200 cu m at 18 m depth.

The hull forms were assessed by the Hamburg Ship Model Basin GmbH (HSVA), where basin tests and manoeuvrability tests were carried out to verify compliance with



SNC's new MR design 'Dream 50' is claimed to give a power/fuel consumption gain of more than 20% over earlier MR designs. Two orders are imminent, but further contracts will be subject to market conditions going forward.

IMO resolutions. Tests were carried out in ballast, plus at the design and scantling drafts.

The use of MAN's ultra-long-stroke main

engine MAN 6G50ME-B9.2 at reduced rev/min and the fitting of an MAN Kappel high efficiency propeller and a bulb rudder,

INDUSTRY - CHEMICAL/PRODUCTS

currently under tank testing, are also expected to generate further improvements in fuel economy.

Once the tests have proved satisfactory, the project will proceed to the plan approval stage and then the detailed design stage.

SNC told *Tanker Operator* that the optimised hull forms/inner-shell geometry has been designed to achieve a lower water-resistance and maximum cargo capacity of about 56,000 cu m, without unnecessarily increasing the main dimensions.

The integrated propulsion solution, tested in HSVA's tank test facility, included the new ultra-low speed MAN G-type engine together with a Kappel design propeller with an increased diameter/rudder bulb. Together with the hull form optimisation, the power/fuel consumption gains were estimated to be more than 20% compared to the average with a more traditionally designed MR.

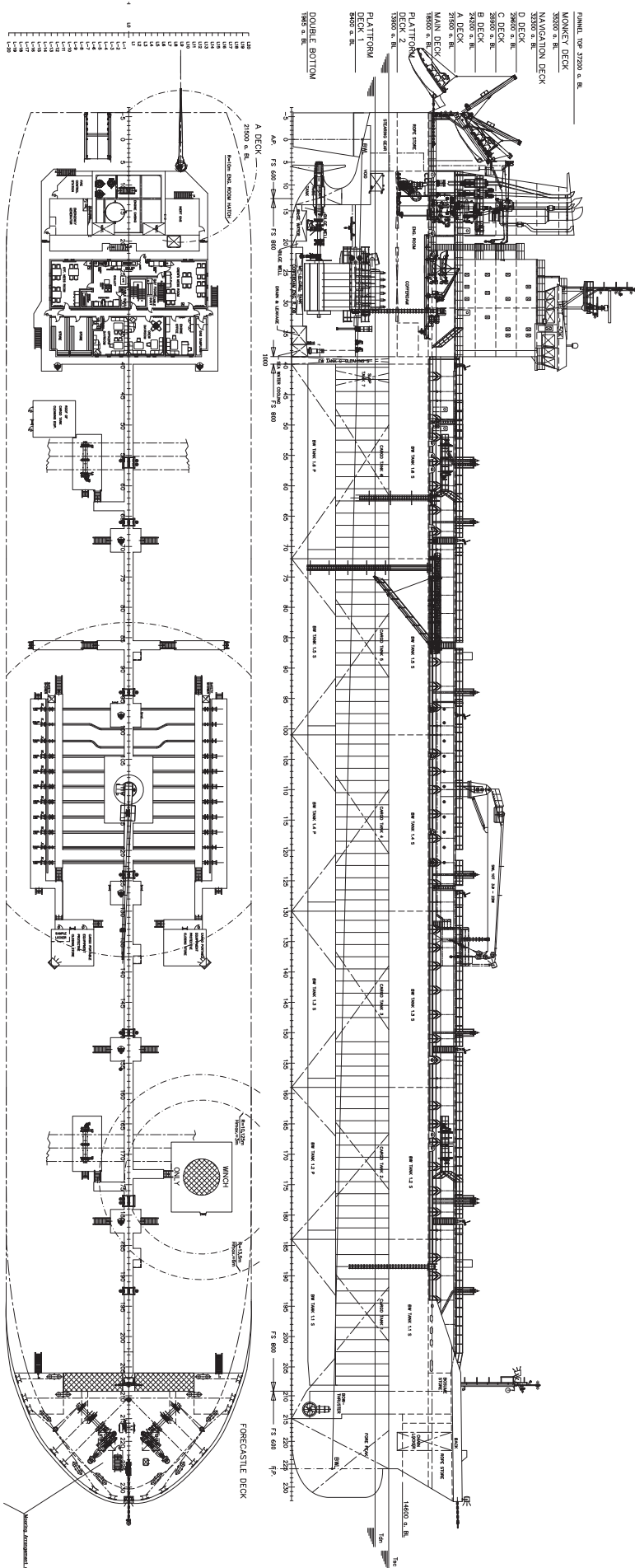
The design also claims about 60% EEDI compliance according to today's IMO requirements. This relates to the index to be achieved for vessels delivered after 1st January 2013. Considering today's calculation formula, 'Dream 50' will also be compliant with the last phase of EEDI implementation scheduled for 2025 – see graph on page 10.

Each vessel will have six segregations to give greater cargo flexibility and the cargo operation will be undertaken from the bridge, ensuring the direct supervision of operations on the main deck and ashore.

Although some of the equipment to be installed is still to be specified, the cargo and ballast pumps will be supplied by Frank Mohn, while a Honeywell cargo monitoring system will be fitted. Jowa will supply the sewage treatment and oil discharge monitor, Polarmarine the



SNC/Histria head Gheorghe Bosinceanu (left) seen at the class signing ceremony in Hamburg with GL CEO Erik van der Noordaa (right).



Principal Particulars

GL Class Notation – Hull: +100 A5 Chemical Tanker Type 2/Oil Tanker with Double Hull, CSR, ESP, NAV-O, RSD, HLP, BWM, VEC, Environmental Passport. Machinery: + MC AUT, INERT, CM-PS.

Length, overall.....	183.03 m
Length, bp.....	175 m
Breadth.....	32.26 m
Depth.....	18 m
Design draft.....	11 m
Scantling draft.....	12.8 m
Total cargo tank capacity.....	56,200 cu m
Deaweight at design draft.....	39,950 t
Deaweight at scantling draft.....	49,000 t
Main machinery.....	MAN 6S50ME-B9.2
Design speed.....	14.5 k

fixed tank cleaning machines and Maritime Protection the inert gas system.

On the bridge, Imtech Germany will be responsible for the installation of the automation, navigation and radio communications systems.

As mentioned, the main propulsion unit chosen is a new super long stroke design MAN 6S50ME-B9.2 engine, giving a lower SFOC of 162 g/kWh, a reduction of 5% on a standard MAN engine.

The rev/min has also been reduced to 99 rev/min from 127 rev/min and this coupled with an increased propeller diameter will give a fuel saving of 4.7%. Both the engine and the propeller will be optimised for a slightly lower speed of 14.5 knots, instead of the standard 15 knots. This will reduce the power required by about 12% with a corresponding 12% reduction in fuel consumption. A cumulative fuel consumption reduction of around 20% is expected over similar designs, the yard said.

Saacke will supply the boilers and Sauer the compressors. The separators filters and heat exchangers will come from the Alfa Laval stable. Schottel will install a transverse thruster to enhance manoeuvrability. The steering gear, windlasses and mooring winches will come from the Rolls Royce group.

Upon their delivery, Histria intends to charter the vessels out for a medium, or long term period to first class charterers.

Jointly, SNC and GL have successfully completed more than 20 tanker projects, including a series of IMO III types of 41,000 dwt from the same yard and for the same manager. TO

Left - 'Dream 50's' hull form was designed to achieve the maximum cargo intake while avoiding a depth increase. The hull form, together with the propulsion solution, was thoroughly tested in HSWA's tank facility in Hamburg.