

Lloyds Register, a member of the LNG Marine Fuel Institute's alliance of organisations bound by a common purpose, is continuing to exhibit global leadership and vision in the LNG fuelled bulk carrier market. Well done!

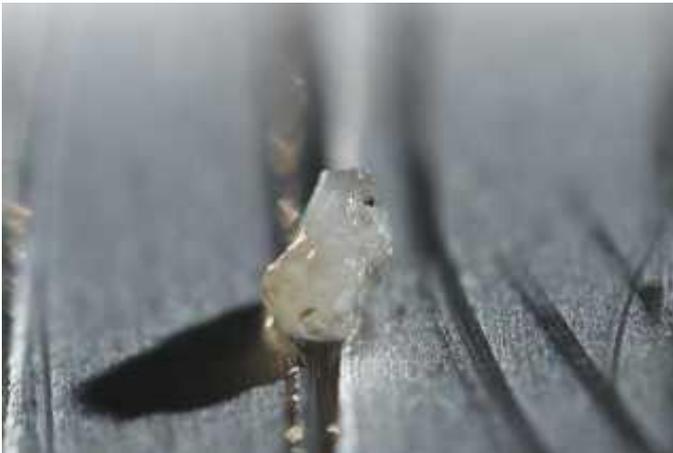
<https://shipinsight.com/articles/aip-of-lng-dual-fuelled-210k-dwt-bulk-carrier-design>

AIP OF LNG DUAL-FUELLED 210K DWT BULK CARRIER DESIGN

Lloyd's Register (LR) *announced* that it has granted an Approval in Principle (AiP) with Jiangnan Shipyard (Group) Co., Ltd (Jiangnan).

LR and Jiangnan have agreed to jointly develop an LNG dual-fuelled Newcastlemax 210K bulk carrier design.

Jiangnan prepared the concept design for Newcastlemax with dual-fuel LNG propulsion, developing an 'LNG Dual Fuel Package with Piggybacked Type C Tanks' (LNG-PTC) especially for bulk carriers switching to LNG dual-fuel propulsion to meet the upcoming sulphur fuel oil emission limit.



The LNG-PTC will feature a dual-fuel main engine (MAN B&W ME-GI or WinGD X-DF), dual-fuel auxiliary engines, fuel gas system (high pressure or lower pressure), cylindrical IMO Type C LNG tank(s) and an LNG related safety system.

Jiangnan has applied the LNG-PTC design to a 210k Newcastlemax bulk carrier, demonstrating the following

advantages:

- The 'piggyback' arrangement has no effect on the ship's dimension and structural integrity of hull girder;
- All LNG related components are located stern part, with no impact to the cargo handling operation;

- Stern hull form and the strength of hull girder are well optimised for providing compensation due to supplemental weight of LNG-PTC;
- Full-width stern deck makes full endurance of an LNG dual-fuel propulsion system possible, whilst maintaining comfort level as equivalent to conventional Newcastlemax;
- A shelter for the LNG tank can be provided as an option for enhancing safety against mechanical damage.

Lin Ou, Chairman of Jiangnan commented: “Jiangnan has a rich experience and strong capability to provide LNG-PTC for either new building or retrofitting on bulk carriers as turn-key projects. Jiangnan has its own facility and qualified team to integrate the fuel gas system and fabricate Type C tank of the LNG-PTC.”

He added, “When considering longer trade voyages, Jiangnan has another two fuel tank systems (Type B and GTT Membrane) as alternative solutions.”

Presenting the AiP, Nick Brown, LR Marine & Offshore Director said: “We are delighted to have worked with Jiangnan on this project. LR provided assistance and support in terms of fuel tank design, analysis of support structure and the LNG fuel system application and checked the design against IGF code, LR Gas Fuelled Rules as well as other relevant applicable standards.”