

Newcomer aims to create Russian CNG-carrier fleet

Dr A N Blinkov and A A Vlasov, from Intari, outline plans for CNG carriers which could be built and operated economically by Russian companies.

OFFSHORE deposits of natural gas comprise up to 50% of world known reserves. Since deposits in the traditional extraction areas are starting to dry up at the same time as demand for energy in the main import markets is growing, compressed natural gas (CNG) sea transport technology is attracting increasing interest, particularly as it enables cost-effective commercialisation of smaller and remote offshore deposits.

The prime benefit of CNG technology is the possibility to load CNG carriers with natural gas directly from a deposit and unload directly to an utility grid. As generally estimated by international experts, while LNG delivery rate is 0.5 billion m³ to 4.0 billion m³ annually, for routes between 250 and 2500 nautical miles, CNG transport would be between 1.5 times and 2.0 times more economic than LNG carriers.

This new technology (discussed in *The Naval Architect's* 2004 supplement and being promoted by several companies around the world) taps sections of existing solutions, such as deepwater development of deposits (down to depths of 1000m) and ship loading and discharge at submerged offshore terminals.

According to Intari's studies, Russia possesses enough R&D and production capabilities of its own for creating the key elements of this new technology, including competitive CNG carriers in capacities up to 12 million m³.

Vessels of 12 million m³ could be constructed in St Petersburg by Baltic Shipyards, with smaller ships coming from Admiralty Shipyards or Severnaya Verf, also in St Petersburg, or from Sevmashtpredpriyatie, at Severodvinsk (near Arkhangel'sk). Design and construction of the first CNG vessels could be completed in five- to six years. An important factor is that the CNG ships built in Russia are estimated to cost 1.5 times less than in foreign shipyards. Thus, real preconditions exist for the creation in the near future of Russian CNG vessels operated by a Russian shipping company (perhaps named Gas Line).



An impression of a proposed Intari CNG carrier, which could be built in Russia in various sizes at an economical price. Both Arctic and temperate-water versions could be constructed.



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Double marine gears from Rheine plant for the LNG tanker called "Gaz de France"

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TECHNICAL PARTICULARS PROPOSED RUSSIAN CNG CARRIER

Length, oa.....	330.00m
Breadth.....	34.00m
Depth.....	24.00m
Draught, full loa.....	11.50m
Displacement, full load.....	84,500tonnes
Displacement, lightship.....	75,420tonnes
Deadweight.....	9080dwt
Length of cargo cylinders.....	24.00m
Number of cargo cylinders.....	2200
Cargo capacity.....	12 million m ³
Power plant.....	19,110kW
Speed.....	18.00knots