

SMM: New Partners in COGAS Container Ship Project



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Project partners GTT, CMA CGM and DNV GL signed a cooperation agreement with new project participants for the Piston Engine Room Free Efficient Containership project (PERFECT) project at SMM this week.

The partners ABB, the Caterpillar company Solar Turbines and OMT will take part in phase two of the project which will investigate the possibility of using a combined gas and steam turbine system (COGAS) to power an ultra large container vessel.

The first phase of the project performed by GTT, CMA Ships and DNV GL showed promising results with regard to the commercial competitiveness of the design compared to a LNG-fuelled ship with conventional propulsion system. The aim of the second phase of the project is to detail the technical concept and the commercial feasibility.

“CMA CGM and its subsidiary CMA Ships position themselves as pioneers by contributing to this worldwide leading innovation,” says Ludovic Gérard, Executive Vice President CMA Ships. “The COGAS system with electrical propulsion gives us a great deal of freedom in the general arrangement and in tailoring the installed power to the real operational requirements we are facing.”

“We are very excited to be part of the PERFECt project. ABB technology is already powering the first LNG-powered ice breaker and cruise ship, and we look forward to exploring its possibilities for container vessels,” says Juha Koskela, Managing Director of ABB’s Marine and Ports business.

“The PERFECt Ship consortium is unique in that it brings all parties together towards one common goal of efficient cargo transportation,” says Ennodio Ramos, Vice President, Power Generation and Strategic Growth of Solar Turbines Inc. (a Caterpillar Company). “In the future, LNG will play a major role as both a marine and low emissions fuel. Gas turbines burn LNG in a clean and efficient manner exceeding any current marine emission restrictions and provide a safe margin for future cleaner ships.”

It is a real pleasure to see top industry names take an interest in driving forward an innovative project like PERFECt, says Knut Ørbeck-Nilssen, CEO of DNV GL – Maritime. “As LNG bunkering stations continue to grow in numbers and global coverage, projects that push the efficiency envelope on LNG-powered vessels could result in significant market advantages for first movers.”

PERFECt phase two will build on the results of the original study which was launched in 2015, utilizing the technical expertise of the project partners to further optimize the overall design. Some of the focus areas for phase two are: process technology optimization of the COGAS system including the steam turbine, use of the available cooling capacity of the LNG, and further optimization of the ship design to attain greater efficiency and increased cargo capacity.

In phase one of the project GTT, CMA CGM (and its subsidiary CMA Ships) and DNV GL released a technical and feasibility study for a COGAS-powered LNG-fuelled electrically driven mega box ship. Based on the results of that study, the PERFECt vessel design was found to offer potentially increased cargo capacity, greater layout flexibility and reduced maintenance costs than comparable conventionally powered HFO and LNG designs.