

Press Release

July 5, 2018

WinGD celebrates milestone order for 100th X-DF engine

Only five years after the launch of the X-DF engine, WinGD is pleased to announce they have secured an order for their 100th X-DF engine.

The award-winning technology developed by WinGD has demonstrated, on tests and engines currently in operation, that it offers stable combustion, inherently low NOx and greenhouse gas emissions and high overall system efficiencies as well as reliable and safe gas operation.

GasLog LTD, one of the early supporters of the X-DF technology, has eight LNG carriers, each with 2x 5X72DF main engines in its fleet with three new builds recently entering commercial operations. For their latest order of additional tonnage at Samsung Heavy Industries in Korea, the same machinery has been selected.

"When we select an engine for GasLog, the most important considerations are the engines' contributions to the safety, competitiveness, sustainability and reliability of the vessel for our customers. When we selected the X-DF it was crucial for us to find a dual fuel engine which could offer all those features for today's and the future environment. WinGD's X-DF engines were the choice for our new vessels and we continue to be confident in their low pressure dual fuel technology." Said, Richard Sadler, Chief Operations Officer, Gaslog Ltd.

"If ever there was confirmation that the shipping industry is embracing LNG as the first choice for IMO compliant engines, the 100th ordered WinGD X-DF, dual-fuel engine is proof. With over 12,000 running hours logged on the first WinGD DF engine in operation (Terntank's Ternsund) and over 100,000 running hours accumulated for the full X-DF engine fleet with 13 vessels at sea, the performance, benefits and reliability of WinGD's low-pressure technology is proven." says Rolf Stiefel, Vice President of Sales and Marketing at WinGD.

"Achieving the 100th X-DF engine milestone in July 2018, after only five years, validates that customers such as shipyards, vessel owners and operators have recognised its unique benefits. Beside its leading position in the LNG Carrier market today, X-DF is gaining ground for future Tankers and Containers to ensure that newbuilds are built to meet 2020 regulations in the most economical way."

"The 2017 decision by CMA CGM, to power their nine "mega" containerships to be built by CSSC shipyards in China with delivery in early 2020 with our 12-cylinder X92DF engines, is a strong statement that greener shipping can be achieved best by applying X-DF main propulsion engines." added Stiefel.

X-DF Benefits

WinGD's low pressure X-DF engines work on the lean-burn Otto cycle when operated in gas mode – i.e. ignition of a compressed lean air/gas mixture by injection of a very small amount of liquid pilot fuel.



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The WinGD X-DF engines undercut the IMO Tier III NOx limit in gas mode in ECA by considerable margins without any additional exhaust gas abatement measures such as EGR or SCR. With liquid fuel consumption for pilot ignition below 1% of total heat release and with practically no sulphur content in LNG, WinGD's X-DF technology offers a reliable solution answering the call for 0.5% global cap on sulphur in marine fuels proposed for 1st January 2020.

The X-DF solution shows the lowest CAPEX and OPEX, low maintenance costs and with the lowest negative impact on the environment.

The particulate matter emissions on X-DF engines is reduced to almost zero, and the CO_2 emissions, inherent to burning natural gas, are further reduced. The total hydrocarbon content of X-DF is considerably lower, compared to four-stroke low-pressure DF engines, which employ the same technology and are used as auxiliaries in every vessel.

The X-DF engine is seen as the most competitive, safe and environmentally sustainable propulsion solution for today and for the future.



Image caption: Powered by WinGD's X-DF technology, GasLog's LNG carrier, Houston **Ends..**

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WinGD in brief:

Winterthur Gas & Diesel Ltd. (WinGD) is a leading developer of two-stroke low-speed gas and diesel engines used for propulsion power in merchant shipping. WinGD's target is to set the industry standard for reliability, efficiency and environmental sustainability. WinGD provides designs, licences, training and technical support to manufacturers, shipbuilders and ship operators worldwide. WinGD has its headquarters in Winterthur, Switzerland, where its activities were founded in 1893.