Winterthur Gas & Diesel

Press Release

15 July 2015

Wärtsilä X92 ordered for new class of mega container vessels

Adding to a rapidly expanding order book for its Generation X low speed two-stroke diesel and dual-fuel engines, Winterthur Gas & Diesel Ltd (WinGD) has announced to equip the first container vessel in the new “mega-class” with cargo capacities over 20,000 twenty foot equivalent units (TEU).

The order involves an 11 cylinder version of the 92 cm bore Wärtsilä W-X92, the largest of the Generation X engines. It will power the hitherto largest container ship in the fleet of French ship-owner CMA CGM. The engine is certified with a dual rating, so that CMA CGM gains maximum flexibility and can react quickly to market developments, ensuring optimum fuel economy. Significantly, the new vessel ship will be one of first and largest in the new class. At 200,000 dwt, it will be capable of carrying a massive total of 20,600 TEU containers within its 400 m length overall and 59 m beam. From the fourth quarter of 2017, the new CMA CGM container ships will be in service.

WinGD states that the 11W-X92 diesel offers a competitive projected total cost of ownership (TCO), in which major factors are the W-X92’s market-leading fuel consumption and its low maintenance requirements. Both these considerations were primary product objectives for the Wärtsilä Generation X low speed two-strokes. Compared to its successful predecessor, the Wärtsilä RT-flex96C, the W-X92 offers a significantly lower fuel consumptions while it develops approximately the same power output but at significantly lower revolutions (80 rpm compared to 102 rpm). This enables substantially higher ship propulsion efficiency for the mega container vessels the engine is designed to power.

As a result, the Generation X has been well received by the shipping sector, resulting in over 180 orders received to date, covering all engine sizes. Prominently, the W-X92 incorporates WinGD’s well proven electronically-controlled common-rail fuel injection system. The system facilitates high levels of combustion efficiency to give exceptional fuel savings across the entire load range of the engine. Another important feature of the Generation X engines is that a single electronic control

system manages their fuel injection, exhaust valve actuation and cylinder lubrication systems. This allows wide flexibility for optimising engine operation over its entire load profile.

“The W-X92 has been designed to provide the utmost reliability as well as the lowest operating costs and lowest emissions essential for the industry,” says Martin Wernli, CEO of Winterthur Gas & Diesel Ltd., based in Winterthur, Switzerland. “Transportation by container vessels is the backbone of the world economy and the vessels are getting bigger to achieve ever greater benefits from economies of scale. Against this background, our two-stroke Generation X engines are designed to have significantly lower operating costs and to substantially reduce the environmental impact of the shipping industry as a whole. Technically, this translates into reduced fuel consumption and thereby also reduced CO_2 emissions, while simultaneously ensuring full compliance with new global legislation on noxious emissions. Winterthur Gas & Diesel has achieved all these goals with the Generation X engines and our proven competence in these vital areas is giving us an important role in the large and ultra-large container vessel segment.”

Successful Factory Acceptance Test

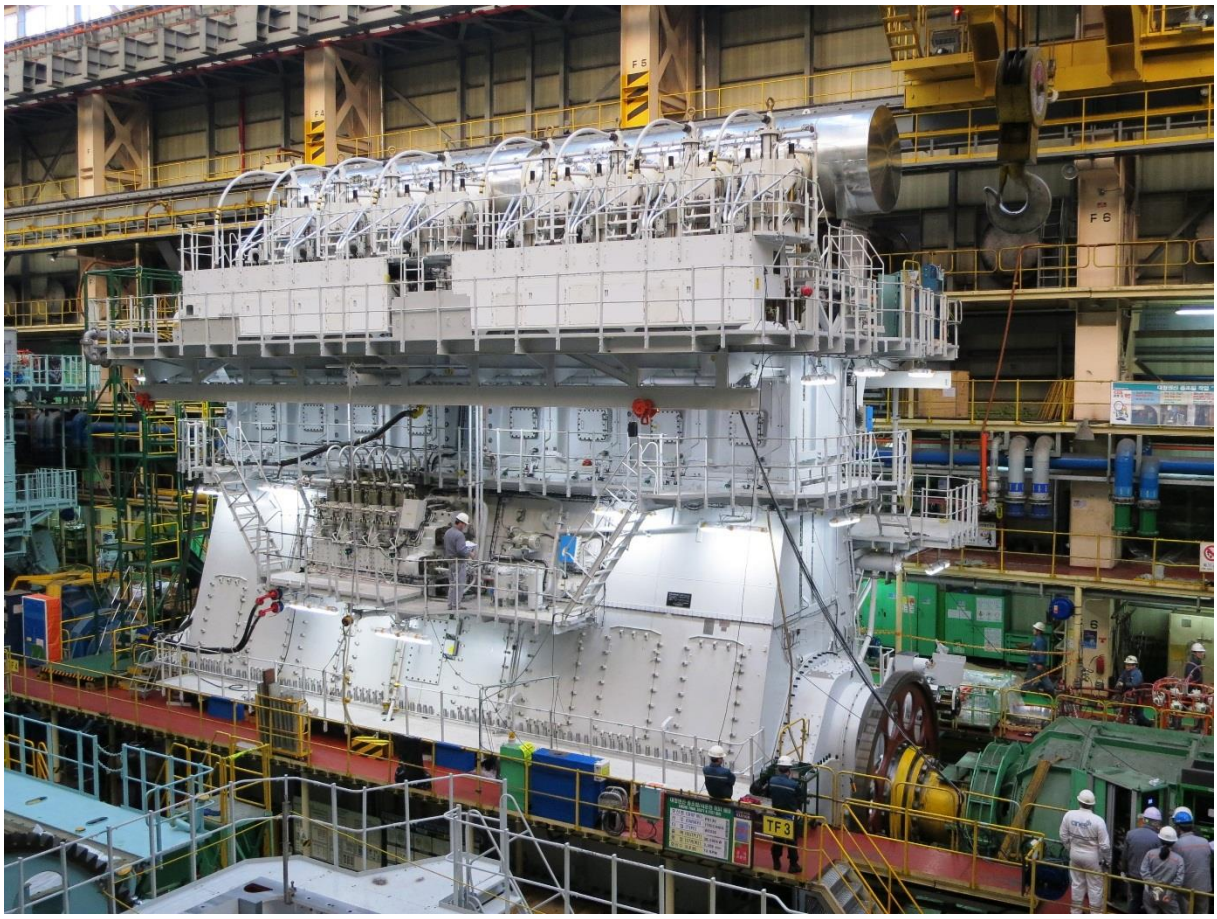
The W-X92 is the most recently launched of the Generation X engines and with its height of 16 m, width of 5.5 m and bore and stroke dimensions of 920 x 3468 mm, it is also the largest engine in the Generation X series ever built.

Preparing the way for deliveries to shipyards and the propulsion of vessels in service, the first W-X92 to be built passed its design validation and Factory Acceptance Test (FAT) in February 2015. The FAT took place at the Ulsan engine works of Korean licensee Hyundai Heavy Industries and WinGD reports that the W-X92 performed exceptionally well, meeting all its design targets.

This development milestone signals that the engine fulfils all the requirements of the Classification Societies. It will be followed by the Type Approval Test and then testing as part of vessel sea trials. These remaining tests are scheduled to take place in the second half of 2015.

After completion of all prescribed tests, deliveries of the engines will start to ramp up. The first four engines scheduled for delivery will be 8-cylinder versions of the W-X92,

to propel a series of four 9,000 TEU Post-Panamax container ships being built for Turkish shipowner Ciner Shipping Industry & Trading. The vessels are under construction at the Hanjin Heavy Industries & Construction (HHIC) shipyard in Subic Bay in the Philippines.



Caption: The W-X92 engine successfully passed the Factory Acceptance Test.

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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 friendliness. WinGD provides designs, licences and technical support to manufacturers, shipbuilders and ship operators worldwide. The engines are sold under the Wärtsilä brand name

and are manufactured under licence in four shipbuilding countries. WinGD has its headquarters in Winterthur, Switzerland, where it started the development of large diesel engines under the name “Sulzer” already in 1898.