MAN PrimeServ is converting a container ship running on a main diesel engine, into a dual-fuel operating engine; making it the world’s first container ship that can run on marine diesel or LNG.

MAN PrimeServ signed a contract in November of 2015 with Wessels Reederei to retrofit their 1,000 TEU container vessel, MV Wes Amelie, from a four-stroke diesel engine to a dual-fuel engine in spring of 2017. Making it the world’s first container ship to run on natural gas and diesel. This project, backed by the German Federal Ministry of Transport and Digital Infrastructure (BMVI), promotes LNG as fuel for the maritime industry.

**About Wessels Reederei**

Wessels Reederei are a German shipping company and are known for their charter business. The company is committed to green shipping; reducing emissions, developing and using alternative propulsion technologies.

**The MV Wes Amelie**

- A modern feeder-vessel operating in the North and Baltic Seas
- Overall length of 151.72m and beam of 23.4m
- Maximum service speed of 18.5kt and an eco speed of 13kt
- Can carry 1,036 TEUs
- High ice class 1A
Benefits of Dual-Fuel Conversion
Reference case: MV Wes Amelie

The Multiplier Effect
When selecting a vessel suitable for dual-fuel conversion, full attention was paid to the development costs and the scalability of engineering services. 16 out of the 23 sister ships are structurally identical to the Wes Amelie, allowing follow-up projects to be easily implemented.

The MAN 51/60DF Engine: It’s Time to Future Proof
The MAN 8L51/60DF, which is being converted to from the MAN 8L48/60B in Wes Amelie’s case, is a highly environmentally friendly engine. By running on LNG, the Wes Amelie will notably reduce emissions of sulphur oxide by over 99%, nitrogen oxide by approximately 90%, and carbon dioxide by up to 20%.

Moreover, dual-fuel engines guarantee to be ready to go through the ECA (Emission Control Area) Zone in following years when stricter marine emission standards will have been set by the International Maritime Organisation.

Depending on LNG costs, there could also be a reduction of bunker costs. Furthermore, the conversion sets the engine back to “Zero” hours status. Last but not least, the IGF code will be in force 2017 onwards; these specific conversion regulations will ease up vessel conversions in the future.

Benefits of Dual-Fuel Engines
- Low emissions (Tier III in gas mode)
- High efficiencies
- Fast return on investment – fast engine conversion & only requires few modifications
- Cuts operational costs – economically viable for ship owners

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