

## WinGD WiDE Pilot Project commended for industry impact

A collaborative pilot project undertaken by WinGD and ship management company Enterprises Shipping & Trading to demonstrate the power of WinGD's Integrated Digital Expert (WiDE) predictive maintenance technology onboard the crude oil tanker *Energy Triumph* has been recognized for its industry impact.

The pilot project which saw WinGD's WiDE system installed on *Energy Triumph*, a 157,000 DWT tanker powered by a WinGD 6X72 engine, began at the end of 2018. The demonstration of the technology's immense potential for advancing condition-based monitoring capabilities and moving shipping towards the goal of predictive maintenance during the pilot project was recognized by WinGD's receipt of the Intelligent Monitoring & Maintenance Award at the Marine Propulsion Awards 2019.

WiDE is a comprehensive, integrated system of digital solutions that enhances the operational efficiency and crew decision-making accuracy related to engine and ship operations. The smart system provides real-time, on-demand monitoring of engine status and condition through the collection and intelligent analysis of engine and machinery data.

The advanced analytics applied are based on WinGD's engine design expertise, specific machinery data, correlated statistical and predictive models, and machine learning algorithms. Collected engine data is analyzed through three different levels of analysis: thermodynamic, know-how-based and machine learning. The combination of such analyses gives the full engine diagnostic picture and valuable engine expertise to create real understanding of the engine condition.

Thermodynamic analysis monitors engine performance based on a detailed thermo-physical process model of the engine; a digital twin, custom-produced for each vessel engine. It then acts as the "reference" engine performance for any possible engine operation setting, the ambient conditions, and the type of fuel. The model is tuned separately for each individual engine and is calibrated using the recorded data from an engine's shop tests. Analyzed data is further validated using the sea trials data. The model constantly calculates the ideal engine performance and defines a "reference optimal condition" which varies depending on the environmental and operational conditions measured in real-time on the ship.

As such, the use of this predictive maintenance technology and its intelligent data analysis provides predictive maintenance, diagnostic advice, engine optimization and rapid support in the case of an engine malfunction.

A troubleshooting feature provides operators with instructions on how to solve engine problems in case of an alarm or if a failure occurs, often before the failure occurs. If a problem is detected, the system identifies the part involved and automatically provides drawings and documents of the components affected.

The WinGD support center provides regular reports on the health status of the machinery, including recommendations for optimal engine operations combining the best of digitalization expertise and person-to-person customer service.

Rolf Stiefel, VP Sales, WinGD says: "Engine data analytics enables predictive maintenance which can greatly reduce OPEX and increase TBO. Our WiDE system is a game-changer technology for the industry and we are honored to receive the Intelligent Monitoring & Maintenance Award at the Marine Propulsion Awards 2019."

Vangelis Candiotis, Fleet Manager, Technical Department, Enterprises Shipping & Trading says:  
“We are excited to see the industry recognize the potential that our collaboration with WinGD brings. We are proud to be the pilot vessel for this ground-breaking technology and we anticipate that together we will see very positive strides towards greater efficiency and a deeper understanding of the health of our vessel.”

WinGD will be exhibiting at this year’s Nor-Shipping event from 4 -7 June, Oslo, Norway. As well as making some significant portfolio announcements during the show, they will be sharing the latest operational experience data as the market leader in low-speed dual-fuel engine technology and how they are continuing to optimize both the X-DF and X-engine technology. You can visit WinGD at Stand E03-02.

**ENDS**

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**WinGD in brief:**

WinGD (Winterthur Gas & Diesel Ltd.) is a leading developer of two-stroke low-speed gas and diesel engines used for propulsion power in merchant shipping. WinGD sets the industry standard for reliability, safety, efficiency and environmental sustainability. WinGD provides designs, training and technical support to engine manufacturers, shipbuilders, ship operators and owners worldwide. Headquartered in Winterthur, Switzerland, since its inception as the Sulzer Diesel Engine business in 1893, it carries on the legacy of excellence in design. For more information visit: [www.wingd.com](http://www.wingd.com)