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Software enables close look at tug's power

While tugs are often intended for a single bollard pull specification, much goes into their ability to develop thrust and fulfil their entire mission. Traditional design methods often select a propeller for towing based on an installed engine's rated power – rev/min – and an accompanying gear ratio. Little, if any, consideration is made of transit speed and frequency, time at idle, or proportional tow pull – yet these typically reflect the majority of a tug's operational profile.

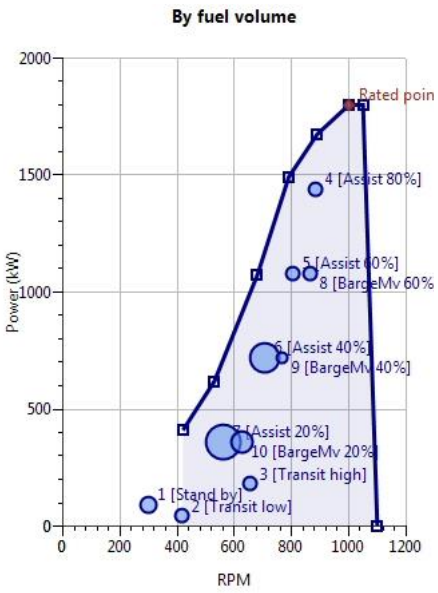
HydroComp's NavCad software now enables naval architects and engineers to investigate powering characteristics across a tug's entire mission.

The new Premium edition of NavCad includes an 'operating modes analysis' utility. By describing how a tug spends its life on the water, technical staff can look at comprehensive energy demands, total fuel consumption and a variety of key performance indicators.

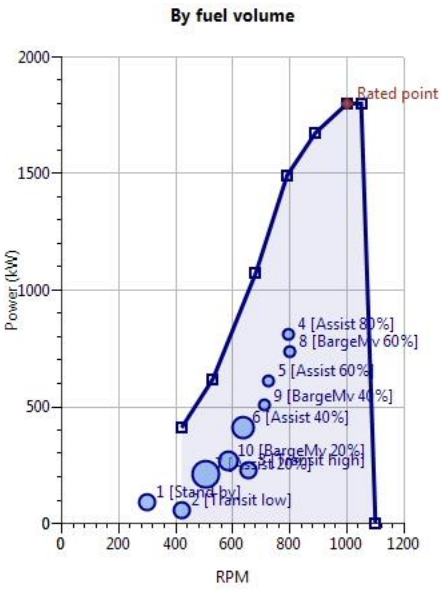
The plots, pictured right, illustrate data points for each of a tug's operational modes for a typical harbour duty profile.

Comparison of the plots demonstrates the projected 'before and after' effect that a retrofit with a new high-efficiency nozzle, propeller and rudders (such as from Nautican) can have on engine load and fuel consumption.

Predicted fuel volumes are represented by the area of each circle, with the engine's power and rev/min marked by its position – making it easy to communicate outcomes to non-technical stakeholders.



▲ *Before*



▲ *After*

The operations management staff of a tug company will appreciate the ability to run these NavCad Premium calculations from other software, such as Excel or in-house codes. Clients can build exactly what they need to meet objectives and requirements by using HydroComp NavCad's powerful, yet easy-to-use, analytical capabilities.

US-headquartered HydroComp is a leader in hydrodynamic software and services for resistance and propulsion prediction, propeller sizing and design, and forensic performance analysis, serving naval architects, ship builders, vessel owners and operators, propeller designers and builders, universities, and government agencies.

- **HydroComp: *ITS 2016* stand no 126**

Delivery crews' service includes rescuing survivors

Redwise delivered 52 vessels under their own power to their new home ports in 2015 with its own dedicated officers and crew. On two of the voyages assistance was given to save lives.

The crew of ASD tug ***OLNG Muttrah*** rescued the sole survivor of ***MV Bulk Jupiter*** during delivery from Hong Kong to Oman, and the ASD tug ***Tal Tal*** rescued one of eight survivors of the ill-fated ***MV Fortune Life***, en route from China to Chile.

Both rescues happened in the South China Sea and coincidently involved the cooks of the lost vessels.

In the first quarter of this year, 10 vessels were delivered under their own power on lump-sum contracts, with dedicated Redwise crews on a turnkey basis, including, for example, fuel, port expenses, certification, and crewing.

The large variety of vessel types, seamanship qualities and flexibility of Redwise deliveries is best demonstrated by the ships themselves. Examples are the conventional twin screw tug ***Carmen S*** towing a 100m barge from Malaysia to South America via the Cape of Good Hope.

At the other end of the spectrum are the diesel-electric driven PSVs ***MAC Kestrel*** and ***MAC Falcon***, each having four Cummins main generators providing 7,200kW in total, driving two 2,000kW FP thrusters. Both PSVs were taken over from the shipyard at Fujian and redelivered to owners in Dubai with Redwise being fully responsible for ISM and ISPS implementation, security, kidnap and ransom insurance and so on.

Another example of Redwise's crew and operations versatility involved the 41m coastal survey vessel ***Almaseh Albahri Sultan***, taken over at the Fassmer Shipyard in Germany and redelivered to its new owners in Jeddah. This survey vessel is designed for shallow draft operation and is propelled by two MAN engines of only 331kW each.

Redwise takes pride in being of service to its customers in a niche market where seamanship and professional management are still highly valued.

- **Redwise Maritime Services: *ITS 2016* stand no 144**

Survey vessel **Almaseh Albahri Sultan**