Fuel-efficiency drive pays off for Italy's D'Amico

The Italian bulker and tanker owner first approached Hyundai Mipo with an idea to build eco-ships four years ago with an efficiency target that many believed 'impossible' — but now both owner and yard are benefitting

Products tankers have been one of the most popular types of eco-ships to be ordered and Italy's d'Amico Societa di Navigazione was one of the pioneers in the sector when it first approached Hyundai Mipo in 2009.

The Rome-based company set the South Korean yard a target of coming up with a handysize products tanker 25% more fuel efficient than its current fleet.

Such gains were thought to be unrealistic at the time but technical director Fabio Tagliavia claims it has been achieved — and he is in no doubt about the consequences for those who are left behind in the eco-race.

"There is a young fleet, which from the efficiency perspective is already obsolete," he said. "They [owners of non eco-vessels] are faced with the possibility of installing a ballast-water treatment system and maybe a scrubber in 2020."

He added: "And these ships are burning up to eight tons per day more than the latest generation. I believe by probably 2018 or 2019, we could see ships as young as 12 years old going for scrap."

Demonstrating the company's faith in the strategy, it committed to two more 50,000-dwt products tankers at Mipo this month.

And that view is not restricted to the tanker market. He estimates that some handymax bulkers delivered in 2010 could be burning as much as 30 tons a day at 14 knots compared to Japanese designs on the market today at 24 tons and less a day, with the potential to fall further.

Tagliavia suggests that a change in attitude from yards goes a long way to explain the emergence of new designs.

He remembers that when D'Amico approached Mipo with the idea of building a series of super-efficient handysize products tankers, the yard did not want to know because it would disrupt its production schedule.

Now, with the recession forcing yards to be more flexible, more streamlined designs are emerging that are reminiscent of hull forms of two or three decades ago, Tagliavia suggests.

Such hull forms can also maximise water flow over the propeller, eliminating the so-called blind spot in the propulsion system where water did not flow and which characterised some of the least-efficient hull designs.

"We gave the yard a target of improving efficiency of the new designs by 20% to 25% of the existing fleet," said Tagliavia. "A normal handy burns 28 to 30 tons a day at 14 knots but we set a target of 22 tons a day, saving eight tons. It was seen as an impossible target."

Tagliavia adds that the target needed to be set high because, although the initial mandatory Energy Efficiency Design Index (EEDI) base line was low — some 10% better than the existing fleet — by 2025 that would be raised to a 30% improvement in efficiency, forcing owners to look ahead.

"To be honest we did not know if 25% saving would be possible, but in our opinion it did not make sense to build a vessel with delivery in 2014 when, in 10 years' time, it could be obsolete, so we started to put pressure on the yard," he said.

Huge drop in fuel consumption

The latest generation of engines helped take a big chunk out of the fuel consumption. But, on top of that, the yard said it would change the hull shape and finally it was convinced to adjust the draught in ballast condition that would allow the propeller diameter to be increased from 5.7 metres to 6.8 metres.

When D'Amico went back to Mipo next time for its medium-range (MR) tanker design, it was also able to win efficiency gains by decreasing Maximum Continuous Rating (MCR) after the International Maritime Organisation (IMO) had declared its minimum power requirements under the EEDI.

And Tagliavia thinks there is room to achieve further efficiency out of the designs through fine tuning. Something as simple as changing lights in the engine room to LEDs could save 50 tons a year per ship, adding up to quite a saving in a 50-ship fleet such as D'Amico's.

Although he thinks the market is set to swing in favour of eco-ships, it will take time before the modern eco-vessel is the predominant type. As Tagliavia points out, the shift from steam turbine to internal-combustion engines, although revolutionary, "did not happen overnight".

BY ADAM CORBETT LONDON ADAM.CORBETT@TRADEWINDSNEWS.COM 20 March 2013, 20:27 GMT

Eco-ships

FUEL-EFFICIENCY DRIVE PAYS OFF FOR ITALY'S D'AMICO

THE ITALIAN BULKER AND TANKER OWNER FIRST APPROACHED HYUNDAI MIPO WITH AN IDEA TO BUILD ECO-SHIPS FOUR YEARS AGO WITH AN EFFICIENCY TARGET THAT MANY BELIEVED 'IMPOSSIBLE' — BUT NOW BOTH OWNER AND YARD ARE BENEFITTING

Adam Corbett **London**
adam.corbett@tradewindsnews.com

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