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Svitzer tugs working on the River Tees in the north of England.



‘Efficiency culture’ is key

Having made considerable savings over the past 12 months, Svitzer UK is continuing its drive to reduce operating costs and in particular fuel consumption, with the help of Royston’s innovative enginei.

Marine diesel specialists Royston developed the enginei monitoring system specifically for the tug and workboat market, in order to address the high rates of fuel consumption experienced in some aspects of a tug operating profile.

Recent orders for 14 further systems from Royston will bring the total installed on the Svitzer UK fleet to 29.

The enginei monitoring system uses a pair of highly accurate fuel flow meters to measure the supply and return fuel flow rates to each engine. The system also tracks the position and speed of the vessel using an integrated GPS receiver and displays the instantaneous fuel consumption rate to the master via a simple LCD interface in the wheelhouse. The fuel consumption, speed and position data are logged at 60-second intervals and these figures are then transmitted to a secure server for analysis and reporting via the enginei web interface.

Svitzer had adopted the enginei system as part of a long-term project to maximise the efficiency of their operations. What started out as a simple need to quantify fuel usage has become a much broader and more involved project.

Svitzer Technical development manager, Ric Young said: “The phrase ‘you don’t fatten a pig by weighing it’ often comes up whenever we’re talking about making fuel savings. The key to making a long-lasting impact is to change the behaviour of both

operators and managers to reflect the most efficient way of operating. We believe enginei has been invaluable in achieving this.

“So far we are seeing approximately 20 per cent savings on the boats with enginei fitted. This is adjusted for work and running hours. Interestingly even tugs without the kit have seen improvements – showing that changing behaviour is the key. On the tugs where we have done detailed analysis we are predicting between 10 and 30 per cent savings against current working practice.”

As a direct result of the successes that they have achieved with Svitzer over the past 12 months, Royston is currently developing an ‘operational efficiency training programme’ for the managers and masters of tugs and similar vessels.

Royston technical manager, Robin Shaw said: “The work that we have done with Svitzer has confirmed our expectations that the most effective way to reduce fuel consumption is to optimise the operation of the ships before doing anything else. The enginei system has been instrumental in verifying this, and continues to highlight areas for improvement.

“We now have a wealth of experience in optimising tug operations, from selection of the correct vessel for the job right down to fine-tuning the way that the master applies the power under certain conditions such as free-running. By creating web-based training material we can spread this knowledge across the industry, to the benefit of all tug operators willing to take the leap towards an efficiency culture.”

With today’s focus on carbon emissions and sharp increases in fuel prices, quantifying fuel usage is an essential feature of any programme of cost reduction. As we all know from driving cars, it is the behaviour and attitude of the person at the controls which has by far the most significant effect on fuel consumption, and without detailed data it is impossible to determine whether any changes are having the desired effect. The enginei system is tailor-made for tug and workboat operators, and in combination with Royston’s training materials will continue to bring substantial efficiency improvements to the industry.



enginei fuel optimisation screen on bridge.