



marine lubricants

optimising engine performance: susesea's successful adoption of taro ultra advanced 40

Chevron's commitment to innovation and operational reliability was clearly demonstrated in the successful transition of a fleet of six bulk carriers to taro[®] ultra advanced 40. These vessels, managed by Turkish shipping operator Susesea and supplied with Chevron marine lubricants via Chevron's official distributor Petrol Ofisi, have an average dead weight of 64,000 tons and were constructed in shipyards in Japan and China.

Taro Ultra Advanced 40 is the latest addition to Chevron Marine Lubricants' range of cylinder oils meeting the highest performance standards. Taro Ultra Advanced 40 is a high performance, 40 Base Number (BN) Category II cylinder lubricant, designed to provide improved marine engine protection and piston cleanliness over previous generations of low BN formulations.

Challenge and transition

All six vessels, built between 2015 and 2021, are equipped with MAN Mark 9 engines, which require cylinder oils with enhanced detergency capabilities. Initially, the vessels were lubricated by alternating between

MAN Category I Taro Ultra 40 (three days at approximately 1.2 g/kWh feed rate) and MAN Category II Taro Ultra 100 (one day at approximately 1.0 g/kWh feed rate) to help maintain piston ring and ring land cleanliness.

Susesea, in collaboration with Chevron Marine Lubricants and Petrol Ofisi, initiated a gradual transition of their fleet to MAN Category II Taro Ultra Advanced 40. This product, officially approved by MAN ES for such operation, was adopted starting June 2024 to help enhance engine performance, reduce complexity onboard and optimise cylinder oil feed rates. Engine conditions were closely monitored via onboard iron and residual BN analysis. Additionally,

onboard scavenge port inspections were conducted at each port of call to ensure engine cleanliness and wear control remained satisfactory. Based on the findings, the crew gradually reduced cylinder oil feed rates in 0.1 g/kWh increments, ultimately achieving an average feed rate of 0.8 g/kWh with Taro Ultra Advanced 40 on all vessels.

Results

The technical manager of Susesea reported that, after transitioning to Taro Ultra Advanced 40, improvements in piston cleanliness, stability, and maintenance were observed with the use of a single cylinder oil. In fact, cleanliness has improved in most cases. Wear rates

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bilge kagan dogan, technical manager at susesea

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and liner conditions were also satisfactory. Feedback from the chief engineers' scavenge port inspection results were positive, confirming that Taro Ultra Advanced 40 offers an effective, reliable and long-term solution at an optimised feed rate. The customer has acknowledged that they have achieved significant savings overall moving over to TUA 40.

Customer satisfaction

Bilge Kagan Dogan, technical manager at Susesea, commended the performance of Taro Ultra Advanced 40 and Chevron's proactive approach and continuous support, which were crucial in achieving efficient operations. "We initially decided to switch to MAN Category II 40 BN cylinder oil based on two main advantages: improved cleaning performance compared to 100 BN oils and cost reduction," he said.

"In terms of cost savings, we achieved around a 33% reduction in feed rates,

which translates directly into one-third lower consumption costs. Additionally, under the previous system, where we used both 40 BN and 100 BN oils, our ability to procure lubricants at favorable ports was limited. With the new single-oil system, we can now make large-scale procurements – for example, a full year's supply during a Singapore call – which has proven highly efficient.

Altogether, Category II 40 BN oil has delivered great value for performance. Initially, we had some concerns regarding performance with 0.5% sulfur fuel, but thanks to the support from Georgia Chaloulou, technical field specialist at Chevron, and the answers we received, those concerns were addressed effectively. We are grateful for her guidance throughout the process."

Ongoing support and strategic solutions

Georgia Chaloulou highlighted the significance of ongoing support and

customised solutions. "It was a pleasure working with our esteemed customer Susesea on this case study. Chevron will continue to seek opportunities to offer strategic solutions tailored to our customers' specific needs and requirements," she stated. "We look forward to maintaining this productive partnership with Susesea to ensure long-term customer satisfaction, both technically and commercially."

Conclusion

Chevron's successful upgrade of the Susesea fleets to Taro Ultra Advanced 40, highlights Chevron's capability and dedication to provide innovative solutions to address current and upcoming challenges with robust lube solutions. Technically focused shipping companies like Susesea, open to innovative products and services, can reap both technical and economic benefits, ensuring smooth and reliable fleet operations under diverse conditions.



Before



After

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