Application News

Fusion Helps Fishing Trawler Optimize Fuel Efficiency and Cut Costs

Industry: Marine ***Service: Net Fuel Consumption*** ***Fluid: Diesel Fuel***

Overview

Due to current levels of overfishing worldwide, vessels have to go further and fish deeper than ever before in order to catch fish, thus spending ever-greater amounts on fuel. With current high fuel prices, fuel can constitute up to 60% of vessel operating costs in some fisheries.

By taking the right action now to optimize fleet efficiency, the fishing industry can lower its fuel costs, reduce greenhouse gas emissions, and decrease the damage inflicted on marine ecosystems.

Situation

Fuel has traditionally been a major operating expense for the offshore fishing fleets, even before the recent escalation in prices. As such, an industry-wide effort is currently under way to evaluate and adapt new fuel-conserving technologies to trawlers, freighters, tenders and other vessels.

One of the largest seafood companies in the North Pacific operates a trawl catcher processor fleet comprised of three vessels, which range from the Bering Sea and Aleutian Islands, to the coasts of Washington and Oregon. On one of the factory trawlers, the fleet operator sought to improve propulsion engine fuel efficiency. The 253-foot, 1584 gross-ton ship is powered by two ALCO 16V251F marine diesel engines providing 3240 horsepower to her shafts.

Solution

In Spring 2008, the factory trawler installed Flow Technology's Fusion Fuel Accountability and Management System in hopes of better understanding and managing its fuel usage. The Fusion system is specifically designed to measure, record, report and display the net fuel consumption and fuel efficiency of marine diesel engines. Whether the vessel uses mechanical or electrical propulsion, or if the propulsion is by fixed or controllable pitch propellers, the Fusion solution is fully configurable to suit any type of vessel.

System Description

Fusion was employed on the trawler's two drive engines in an effort to conserve diesel fuel during extended operations in the Bering Sea. In this harsh environment, the system's fuel flow meters and electronics would be subjected to severe vibration created by the engines.

Fusion flow meters were installed on fuel supply/return lines to measure diesel fuel provided to the engines. An LCD display on the engine room control console indicates fuel consumption and efficiency. The system automatically compensates for varying fuel temperature, producing highly accurate measurements which can be stored for later trending analysis. The port engineer can perform offline interpretation of data for a comparison of fuel consumption patterns from engine to engine. This enables modifications to vessel operating strategies at sea (such as finding the most economical RPM), as well as broader changes aimed at achieving future reductions in overall fuel costs.

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