

Fuel supply system upgrades

passenger ships | cruise ships | ferries

LOW SULPHUR FUEL COMPATIBILITY

FUEL CHANGEOVERS

OFF-SCRUBBER OPERATION



Can your vessel benefit from a fuel supply system upgrade?

A changing operational environment

Passenger and cruise ships set the highest standards when it comes to safety, reliability and operational efficiency.

The passenger ships usually operate in urban areas with strict environmental regulations and especially for the cruise ships the popular destinations are often in environmentally vulnerable areas. Therefore all opportunities for environmentally-friendly operation must be explored. Due to the nature of destinations, also fuel changeover systems for low-sulphur content fuels are necessary.

The sailing schedules have been calculated carefully to yield the maximum income for the ship investment and all delays are costly. There is no room for delays related to the operation of fuel systems.

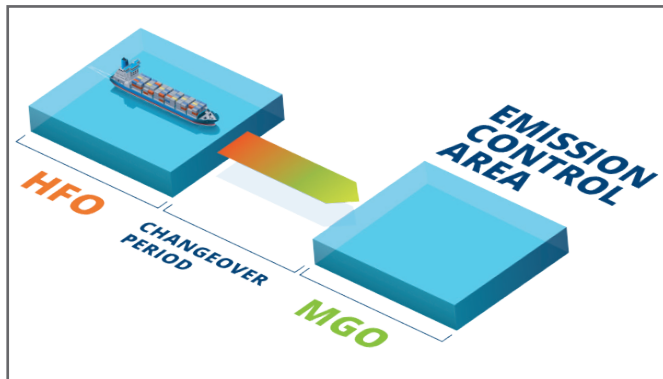
Guaranteed safety for any choice of fuels

Your ship's main and auxiliary engines may originally have been designed to run on fuels, the properties of which differ from the fuels that are favoured today due to the new regulations. Maintaining the correct fuel viscosity, temperature and pressure at the engine inlet is crucial regardless of the fuel in use or the complexity of a particular fuel supply system.

Injection pressure losses caused by too low a viscosity may result in difficulties during start-up and low-load operations. Further, the usage of different non-compatible fuels without a proper control may lead to unstable fuel supply. Auramarine's fuel supply system experts are committed to come up with customer-specific solutions to avoid these problems.

To ensure a smooth start-up of the engines after port call where cold ironing has been applied, you can benefit from Auramarine's HT water preheating units that keep the right fuel temperature.

Fuel changeovers: can your vessel and staff perform safely and efficiently - at the push of a button?



If you operate in and out of sulphur emission control areas and need to switch between high-sulphur content heavy fuel oil and low-sulphur content fuels, then you know that the changeover process is complex and time-critical. The viscosity must not drop below 2cSt or exceed the engine's maximum limits. The temperature change rate at the engine inlet must not exceed 2°C/ minute. Installing Auramarine's FuelSafe™ changeover system offers a cost-efficient, rapid method of complying with SECA requirements if your vessel has segregated tanks for carrying two or more fuels.

What if you need a backup for scrubbers?

In case of a scrubber malfunction, scrubber maintenance, or any other situation where the scrubber operation becomes impossible and you must use scrubber by-pass, you need to keep your ship going by switching to another type of fuel.

That is where a Auramarine MGO/MDO fuel supply system offers redundancy and operational safety by enabling the engine operation by switching to low sulphur fuel supply. Costly delays, often comprising reporting and contacts with authorities in case of unintentional emissions can be avoided.

Auramarine delivers customised systems designed in a way allowing fast adaptation to any existing fuel handling system on board, thus minimising layoff time. A suitable combination of the components can be tailor-made for your vessel considering your operation profile, routes, space limitations and engine room arrangement.

Typical Auramarine equipment for passenger ships, ferries and cruise liners:

- HFO/MDO feeder booster units
- Fuel changeover systems
- Emergency pump units
- MGO Cooling and chilling units
- HT-water preheating units

Flow meter upgrades help you get more accurate data



Modern flowmeters provide accurate data of your actual fuel consumption to support your reporting and operations, so you may have considered replacing any outdated flowmeters with modern ones. But how to find the optimised solution with minimised piping and be confident of a well-working integration to the existing system?

Auramarine can provide a flowmeters retrofit including the eventually needed design and modifications to ensure that the new flowmeters fit your system, that the amount of piping is minimised and that the available space is used smartly. Whether your scope is large or small, with a full Auramarine flowmeter retrofit you can be sure that the flowmeters fit your fuel system.

“ A fuel supply system upgrade pays off to avoid any operational risks.

A variety of options exists to meet the demanding emissions regulations and Auramarine is at your service to find the safest and most efficient fuel supply solution for your ship or fleet.”

Auramarine is your trusted fuel systems expert for marine and power industry. Our proud heritage stems from the founding of the company in Finland in the early 1970's. Since then we have delivered over 14 500 robust and reliable auxiliary systems to our customers all over the world, continuously aiming for superior service and customer value.

WE ARE THE PIONEERS IN FUEL SYSTEMS.

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