

Service News



Maintenance service regarding low speed operation of main engine

Recently, low speed operation of main engine is performed with the aim of an improvement of fuel consumption. As for MIURA's products, exhaust gas economizer that is heated by exhaust gas of main engine, aux. boiler that is connected with exhaust gas economizer, and fresh water generator that is heated by cooling fresh water, are thankfully adopted by you.

Operating environment of main engine varies, so operating environment of secondary equipment also varies depending on circumstances.

We inform you of the important points in products' maintenance with regard to likely accidents for each product. Please keep frequent maintenance for the sake of keeping the condition of equipment that is not much different from normal operation, and make good use of this information for trouble prevention.

Moreover, please check a guide of low speed operation announced by each main engine's maker.

Important Points for Operation of Exhaust Gas Economizer and Aux. Boiler

Gas flow rate in nest of tube gets late as amount of exhaust gas reduces, in comparison to normal operation.

On the other hand, exhaust gas temperature falls more under low speed operation than under normal operation depending on a loading area.

Therefore, heat collection rate gets lower. Furthermore, soot will adhere and be deposited more qualitatively on water tubes, lower shell plate and fixed plate of water tubes under low speed operation than under normal operation.

- ☐ After low speed operation, open cleaning hole on the side of exhaust gas in port, and inspect the condition of soot deposit. Don't perform boiler water blow. Perform it after the economizer is cooled enough as water level is kept standard. Inclusion of air from cleaning hole may cause soot fire. Make preparations for fire extinguishing and open cleaning hole slowly.
- ☐ As for the removal method of deposited soot, refer to an operation manual.
- ☐ Frequent high-pressure cleaning with water may cause corrosion of water tube etc. We recommend cleaning by vacuum cleaner or compressed air.
- ☐ Measure and record initial pressure loss under normal operation when you replace a body or after cleaning, and increase active frequency of soot blower more than usual. Measure pressure loss under normal operation periodically. In case that pressure drops by 1.5 - 2 times, increase active frequency of soot blower to ease a rising trend of pressure loss. Manage pressure loss daily.
- ☐ Perform soot blow during sailing, when load is as heaviest as possible.
Increase active frequency of middle soot blower and lower soot blower, and stir deposited soot on lower shell plate and fixed plate of water tubes to discharge them with accelerated gas flow. As for the operation procedure, refer to an operation manual.
- ☐ Adjust steam loss or perform reheating to prevent a steam pressure loss inside of a body and temperature fall of water tube wall. Failure to perform these may cause corrosion.

- ☐ Control steam supply for unused equipment to keep additional heating of aux. boiler to a minimum. Inspect steam trap, temperature control valve of the superheater, excess steam dump valve and by-pass valve of these to check that steam is effectively used.
- ☐ Please consider having additional stock since increase of on-off control action of a burner not only while sailing but also in port shortens replacement cycle of consumption parts such as nozzle tips, spark rod, coupling rubber.
- ☐ Please consider loading spares of main equipment since operating time of oil pump or fan increases.
- ☐ Decrease of steam use amount makes temperature of drain outlet in drain cooler drop. Adjust cooling seawater amount to keep the normal temperature of cascade tank.

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<https://www.miuraz.co.jp/en/marine/service/network.html>



If you have any questions, please contact nearest MIURA's office.

We hope to receive your continuous support in the future.