

Energy savings for large auxiliary boilers

Aalborg Industries has developed a modification kit for the aux. boiler and burner system on MR tanker ships that optimizes the operation of the burner on minimum load in port and thereby saves energy.

Excessive boiler capacity

A substantial amount of MR (medium range) tanker vessels in operation or in the building phase are equipped with hydraulic or electrical cargo pumps. This pump configuration means the tankers will only have a modest steam demand during cargo offloading.

MR tankers are equipped with medium size boiler plants of 15-25 t/h steam capacity. The steam plant configuration is usually based on one large capacity oil-fired auxiliary boiler and one exhaust gas economizer, which means that the large capacity oil-fired boiler has to be



Air register modification kit

in operation during port stays even though only a small steam supply is required. This results in frequent starts/stops of the boiler to supply this modest steam demand.

Aalborg Industries KBSD burner with lance

Many starts/stops wear down the equipment

These frequent starts and stops will in many instances have the result that the Forced Draught (FD) fan remains in continuous operation as there are restrictions to how many starts the electrical motor is allowed per hour in order not to overload the electrical motor.

Furthermore, the burner will not operate optimally at low load conditions due to the higher excess air ratio. In addition, the high excess air ratio will result in a lower boiler efficiency.

Energy saving solution

Aalborg Industries has developed a burner modification which will result in higher turndown ratios. The modification enables us to operate the burner/boiler at an even lower minimum load and thereby achieve longer running periods for the burner and normally at higher design loads than the minimum load for the original burner size.



Energy saving burner modification kit

The modification kit consists of the following tailor-made components:

- 1 - new burner lance with a smaller burner nozzle tip
- 1 - specially designed secondary air flow restriction kit
- 1 - new software designed to operate with two different burner lance sizes
- 1 - frequency converter for the FD fan motor



Burner lance retracted from the windbox

The energy saving burner modification kits are available for Aalborg Industries' boiler plants of types MISSION™ OL and AQ-18 with a design output of more than 15 t/h steam output. The installation and commissioning requires that one of our service engineers attends the vessel for approx. 2 to 3 days.

Contact us

For more information about our service solutions, please contact our Global After Sales offices.



Trouble-shooting and well documented analyses form the basis of our service and upgrade proposals.



Experienced technicians, engineers and service engineers are at your service with sound advice.



Sometimes, a complete boiler replacement is a more economically viable solution than a mere repair.

One contact for all services - any matter, any time and anywhere

Aalborg Industries' key account concept for Global After Sales service ensures that our customers benefit from our efficient After Sales services by our worldwide organisation. To best do this, you will be serviced and supported by the Aalborg Industries key account company nearest to you - by the people you know and trust as your favorite national or regional service centre. We speak your "language".



- Global After Sales key account centre
- Aalborg Industries locations

The Aalborg Industries Group offers:

- Service and repair of our own brands of boilers, heaters and exhaust gas economizers such as AALBORG™, SUNROD™, UNEX™ and WIES-LOCH™.
- Repair and upgrade of other brands of boilers such as Babcock & Wilcox, Foster Wheeler, Combustion Engineering, Kawasaki, Miura, Mitsui, Osaka, Kangrim, TPK, etc.
- Service of inert gas systems.
- Service of burners and control/safety systems.
- Trouble-shooting and problem analysis. Advice on more economical, environmentally friendly operation.
- Servicing and upgrade of burner and boiler combustion control systems.
- Sales of spares for boiler pressure parts and automation.
- Boiler/burner conversion/retrofit on Floating Production Systems.

Service Solutions is published by the Aalborg Industries' Global After Sales organization and offers solutions to operating problems and challenges. Ideas and suggestions for topics are most welcome.

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