Boiler Management

Auxiliary Boiler Controls

AUXILIARY BOILER CONTROL

General Information

Kockumation Group company Texon, knows how to carry out a successful retrofit and has the track record to back it up. Drawing upon Texon's vast experience and competence within combustion controls for marine propulsion boilers, your steam plant will be optimized to fulfill higher turn down requirements and drastically improve the fuel economy and maintenance costs of your steam plant.

Typical problems
The vessel is slow steaming and the steam production from Exhaust Gas Economizer is too low, the vessel needs about 2 t/h of steam extra from the Auxiliary boiler.

- Maximum evaporation from Aux. Boiler is 20 t/h

- Turn down on boiler plant is 4:1, minimum steam production is 5 t/h

- This will lead to boiler starting and stopping since minimum auxiliary steam production is higher than the needed steam consumption.

- This will lead to a very bad fuel economy since every start and stop means a full furnace purge. (Each furnace purge will waste stored heat in boiler heat transfer surfaces)

- In turn, it will also have a very negative impact on the technical life time of the boiler due to being warmed and cooled frequently. Drastically increased maintenance cost will be the resulting factor as well as operational disturbances.

Full responsibility supported by vast experience

Texon Automation not only knows how to make control systems but more importantly understands the process the control system is in charge of and how important the field equipment is.
With our long experience we know that a loss of the boilers or a badly tuned steam plant is potentially a great operational problem and a huge financial waste. We are aware of the tight time schedule that superintendents live with.

Typical project steps:

On board survey

- Current system is examined, coupled with operational needs.
- List of field equipment to be replaced is established. Areas of improvement are identified
- Report along with firm offer for retrofit is sent to customer Supply & Engineering
- Engineering of system, procurement of field equipment
- Submission of design approval to class
- Fabrication of complete system, FAT in presence of class, once design approval is recieved from class
- Shipment

Installation

- Installation of system
- Installation of field equipment

Commissioning

- Boiler safeties tested
- Control loops tuned and tested
- Fine tuning of process parameters once the boilers are in normal operation.
- Site acceptance test (witnessed by class according to SAT protocol approved by class)

Optimization of burning process

- Fine tuning of system done during first laden voyage
- Training of on board crew

Critical filed equipment scrutinize during survey

- Fuel oil: control valve, actuator, positioner and burner
- Combustion Air: Inlet vanes, actuator, linkage, flaps and positioner
- Drum level control valve, actuator and positioner
- Steam pressure and flow transmitters
- Fuel (oil) pressure and flow transmitters
- Air flow transmitters and arrangement
- Drum level and flow transmitters
- Oxygen analyzers
- Atomizing steam pressure controls

Please visit our website for more information about product line.

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