

OSAKA BOILER

TECHNICAL INFORMATION

OSAKA BOILER MFG.CO.,LTD.

Cleaning procedure for exhaust gas side of water tube type composite boiler

【Subject model: OEVC1, OEVC2, OEVC3, AQ5】

In recent years, many troubles with tube leakage of exhaust gas side of water tube type composite boiler have been reported from the users. These troubles are mainly caused by inadequate or too much washing with water of the tubes.

Wrong handling may further accelerate the sulfuric-acid corrosion at the dew point and shorten the life of boiler tubes extremely. Such three factors are mostly damaging boiler tubes:

- a) Wash with water after every voyage.
- b) Wash with water without neutralizer.
- c) Soot deposit due to inadequate wash with water.

We give some damage examples in the photos:



Damaged heat exchanger tubes-1



Damaged heat exchanger tubes-2



Tube leakage



Thinned tube by the corrosion

We recommend the cleaning with using general service air on board, instead of the washing with water. The washing with water causes tube corrosion and leakage, and can be performed only when the ship is docked.

The procedure for cleaning with general service air is described below.

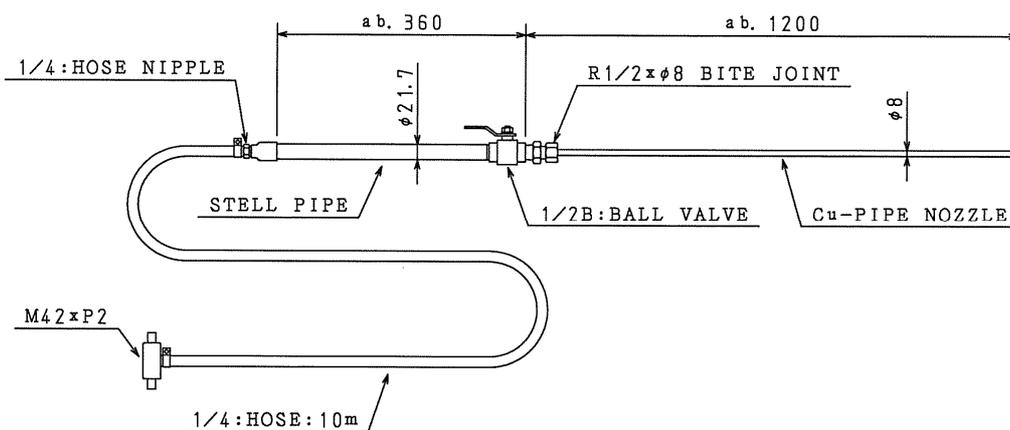
1. Caution at cleaning

100% SAFETY GLASSES, DUST MASK, EARPLUGS AND GLOVES REQUIRED WHILE YOU ARE CLEANING. Avoid burns with cleaning; stop the oil burner, and reduce boiler steam pressure below 0.19MpaG.

Please prepare a fire extinguisher and a fire hose for a fire.

2. Tools for cleaning

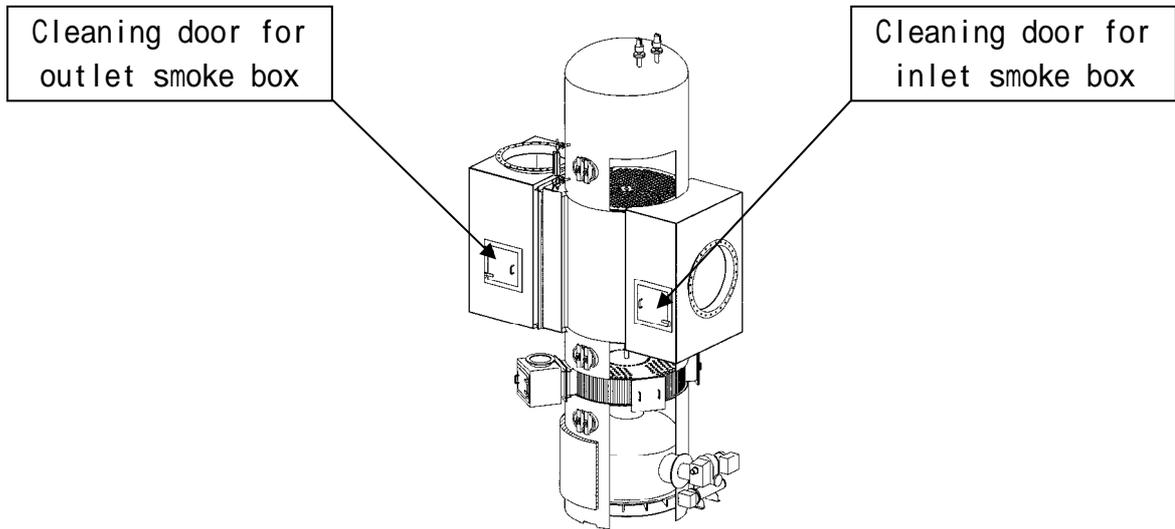
1) Cleaning tool; the tool in the drawing is available as an all-purpose product, also it can be set up on board:



- 2) Air hose
- 3) 20 liter pail or cloth sack
- 4) Dustpan, etc.
- 5) Fire extinguisher, fire hose

3. Air cleaning

- 1) Open both cleaning doors of the smoke box on exhaust gas side, and enter in the smoke box through the gas inlet side.
- 2) Insert the cleaning tool between the tubes.
- 3) Blow away soot on the whole surface of the water tubes, stay tubes and tube plate, starting from the edge of the wall toward the center.
- 4) After the cleaning of the inlet side, enter in the smoke box through the outlet side then work the same way again.



4. Settling Soot

Wait for about 15 minutes until the soot settle down on the tube plate.

5. Removing Soot

After the soot settled, blow it toward the gas outlet side of the smoke box, and then remove it with a 20 liter pail or cloth sack.