



山東北辰

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AUXILIARY STEAM HEATDER

Operation and Maintenance Instruction Manual

Shandong Beichen Mechanical&Electrical Equipment Co.,Ltd.

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1. Equipment Overview

1.1 Equipment Purpose and Principle

The auxiliary steam manifold is used to distribute the steam within the system while also acting as a buffer for the steam.

1.2 Structural Features

None.

1.3 Equipment Parameters

Please refer to the "Technical Specifications Table" in the accompanying drawings.

1.4 Equipment Outline Diagram

Please refer to the drawings provided with the equipment.

2. Equipment Description

2.1 Structural Layout Description

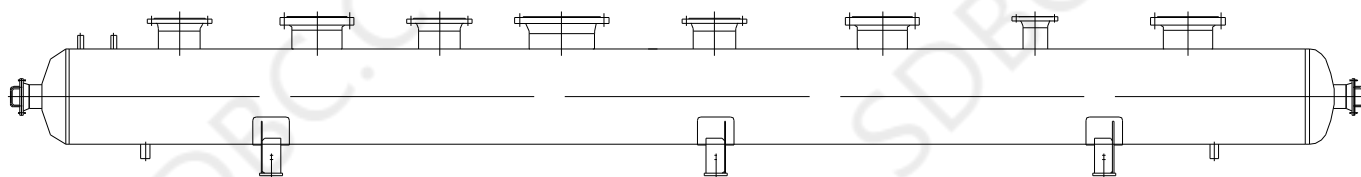
The main components of the auxiliary steam manifold are: the shell and supports.

1). Shell:

The shell is a structure where two standard elliptical heads are welded to a cylindrical section. The external interfaces include steam inlet, steam outlet, drain port, handhole, and safety valve port.

2). Supports:

The auxiliary steam manifold has two or three supports (one fixed, and one or two rolling or sliding supports). The structural schematic is as follows:



3).Attachments

a. Instruments:

The shell is equipped with an on-site pressure gauge and a bimetal thermometer interface.

b. Safety:

The shell is equipped with a safety valve to prevent damage caused by overpressure.

2.2 Factory Documentation

- a. Product Certificate;
- b. Quality Certificate;
- c. Completion Drawings;
- d. Installation, Operation, Maintenance, and User Manual;
- e. Delivery List.

3. Installation

3.1 Before installation, remove the seals from all pipe connections, and ensure no foreign objects fall inside the equipment during the process.

3.2 This equipment has two or three saddles, one fixed saddle and one or two sliding saddles. The foundation plates of the fixed end and the sliding end should be on the same plane.

3.3 Hoist the equipment, align the holes on the saddles (note that the sliding end has elongated holes) with the bolts on the foundation plates at both ends, place and adjust until the equipment is level (slope less than 0.2‰). The longitudinal centerline of the saddles should coincide with the centerline of the foundation plates.

3.4 Tighten the nuts and locknuts on the anchor bolts of the fixed saddle, and tighten the nuts on the sliding saddle's anchor bolts, maintaining a gap of 1-2mm between the nuts and the washers.

4. Commissioning and Shutdown Precautions

4.1 During operation, overpressure operation is strictly prohibited. The equipment's performance indicators should comply with the

requirements specified in the drawings.

4.2 Regularly inspect the equipment during operation for any abnormal deformation or noise. If any abnormalities are found, promptly perform maintenance.

4.3 Regularly check the valves and measuring instruments for proper operation during equipment operation. Inspect for leaks and replace or repair any faulty parts.

4.4 When shutting down the equipment, drain all wastewater inside to prevent corrosion.

5. Regular Inspection and Maintenance

5.1 Regular inspections of the equipment should follow the regulations outlined in the 《Safety Technical Supervision Regulations for Fixed Pressure Vessels》 .

5.2 External and internal inspections, as well as the determination of safety status levels, should follow the 《Inspection Regulations for In-Service Pressure Vessels》 .

5.3 The main inspection and maintenance tasks for this equipment include:

5.3.1 Remove any accumulated rust or mud at the bottom, and flush with desalinated water.

5.3.2 Check for thinning of the equipment walls.

5.3.3 Regularly repair or replace all connected valves.

5.3.4 Inspect and take preventive measures to avoid damage to internal components.