



Steam Boiler Troubleshooting Guide

In the process of boiler sales and after-sales service for more than 20 years, we have accumulated a lot of experience in boiler installation, commissioning and operation. There will be some failures during the operation of boiler and its accessories. We will help customers solve it as soon as possible, and try our best not to affect the use of customers. Now we have compiled a list of possible boiler failures and solutions based on years of experience for your reference.





These failures include but are not limited to failures of burners, failures of safety accessories and valves, failures in water level control, failures of water pumps and fans, etc.



Failure category	Specific failure	Cause of failure	Troubleshooting
Burner	Burner locked after start up	<ol style="list-style-type: none"> 1. Air pressure switch is not adjusted well or damaged 2. Piezometric tube of pressure switch is blocked 3. Back pressure of burner is too high 4. Flame detection circuit fault. 5. The fan is dirty 	<ol style="list-style-type: none"> 1. Adjust or replace 2. Clean 3. Check whether the flue gas duct is blocked 4. Replace the controller 5. Clean
	The burner is locked	<ol style="list-style-type: none"> 1. Air pressure switch failure 2. The maximum gas pressure switch action. 	<ol style="list-style-type: none"> 1. Replace or repair 2. Regulate or replace
	Pressure gauge pointer does not move or return to zero, the pointer shakes, the surface is blurred or has drops of water.	<ol style="list-style-type: none"> 1. Cock is not open or position is wrong or cock and gauge bend pipe channel is blocked. 2. The pointer and center shaft are loose or the pointer is stuck. 3. Joint of spring bend pipe and gauge stand is leaky or spring bend pipe is permanent deformed. 4. The sector gear and small gear are loose or disengaged 	Pressure gauge should be repaired or replaced in professional department and repaired or replaced pressure gauge could be put into use after checked by local measurement department.



Safety accessories and valves		5. Gossamers on center wheel loss elasticity or fall off. 6.Both ends of the central axle is bended.	
	Water level gauge shown is higher than the actual water level	1. Steam cock is blocked 2. Steam cock is closed by accident 3. High alkalinity of boiler water results in foaming	1. Wash or unchoke steam cock 2. Open steam cock 3. Strengthen blowdown
	Safety valve steam leakage	1. There are dirt on valve sealing surface 2. Sealing surface is damaged 3. Stem bending deformation or valve core and valve seat support surface deflection 4. Spring failure	1. Clean safety valve and if cleaning is no effect, tear it down and clean 2. Replace the valve core and valve seat or grind after machining 3. Replace the valve stem or reset to level 4. Replace the spring
	Safety valve don't open if over-pressure	1. Spring bending 2. Stuck because valve seat and core installation location is not right.	1. Replace the spring 2. Re-installation the safety valve
	No water level signal from water level controller	1. Power is disconnected 2. Connecting pipe blockage 3. Dirt is in floating ball type shell which may hinder floating ball movement	1. Power on 2. Dredge communication pipe 3. Clean-up
	Water level alarm does not match	1. Floating ball type Water level switch positon is not adjusted well 2. Electrode type Measuring electrode is not adjusted well	1. Floating ball type Adjust the water level switch location 2. Electrode type Adjust the electrode position and the status of insulation
	Blowdown device blowdown pipe blockage	Blowdown pipe diameter is too small and installation position of the blowdown valve is improper.	The blowdown pipe diameter should be greater than DN25 and the diameter of the blowdown pipe in drum should be greater than DN40
Water pump	Water in water pump can not be out	1. Cooling water tube is blocked 2. There is air in the pump head 3. Impeller is reversed 4. The actual resistance is more than lift of the pump. 5.Impeller seal is damaged	Repair or improve according to the specific circumstances
		1. The fan shaft and motor shaft are	Repair or improve according to



Fan	Bearing box vibration	decentration. 2. Deformation of the impeller 3. The unstable foundation or loose anchor bolt 4. Friction due to sealing too tight	the specific circumstances
Boiler drum	Water hammer in drum	1. Loose close of check valve in feed water pipe 2. Stop supplying water for a longtime and vaponization exists in economizer, condenser or pipeline	1. Repair or replace the check valve. 2. Better adopt continuous water supply and open economizer and condenser back-water pipe valve to make the steam back to soft water tank
Steam pipeline	Steam pipeline water hammer	1. Warm pipe or drain not well before steam supply 2. Main steam valve opens too fast or too large before steam supply	1. Warm-up and drainage pipe 2. Slowly open the main steam valve