

BOILER COLD START ROUTINE

A cold boiler can be defined as a vessel that is at low or atmospheric pressure and has a temperature below the boiling point of water. To bring the boiler back up to pressure/temperature safely the following items should be followed as a guide:

1. All work should be undertaken by a 'Competent Person' (CP) as defined in Regulation 2, of the 'Pressure Systems Safety Regulations 2000' (PSSR), suitably trained in Industrial Boiler Operation or Boiler Plant Operation Management.
2. Check that all work on the boiler and downstream steam supply systems is completed and that all permits etc have been signed off. Examine all boiler fittings and joints for tightness, for example: smoke box doors and mud hole covers. For further guidance see 'PSSR' Regulation 11, Operation.
3. Ensure that the boiler is filled to the correct water level (in the case of steam boilers) with the boiler/drum vent valve initially open to vent air from the system during the warming process. For hot water boilers ensure the water space is fully flooded and no air pockets are left in the shell.
4. Check that the ignition and main fuel supply valves to the burner unit are switched on and no fuel leaks are evident. Confirm that the electrical supply is reinstated to the burner control panel and that the safety interlocks are in working order (no water level alarm, door switch is closed etc).
5. Start the burner and inspect the flame for any abnormal colour or shape. Note the furnace may be damp with condensation if the boiler is cold - this is normal.
6. Keep the burner at low fire to allow the boiler to warm up slowly and evenly. Undue stress can be caused to welds and joints if the burner is allowed to move to high fire when the boiler is not up to temperature. **DO NOT RUSH THIS PROCESS** – follow the original manufacturer's instructions. Close the boiler/drum vent valve at 15psig (1.03barg).
7. Do not leave the boiler unattended during the warming period unless it is specifically designed to do so and the site risk assessment demonstrates that it is safe. (See 'BG01 Guidance Note' Section 8.1 'Boiler instructions').
8. Once the pressure/temperature of the boiler is up to the normal working level, the system is fully operational and all functional alarm tests are completed, the boiler may be put back into service assuming a valid insurance certificate is in place and the system has been inspected as part of a written scheme of examination under the 'Pressure Systems Safety Regulations 2000'.
9. The opening of any valves connected to the boiler must be done slowly to allow system pipework to warm through and expand. Check that packing gland seals are tight and all joints are free of leaks. (See 'Safety Guidance Notice No. 3').
10. Record all operations in the boiler-house log book with time, date and signature as defined in Section 5 'Personnel and Responsibilities' in the 'BG01 Guidance Note'.

Notes:

These notes are intended for guidance only, and SAACKE Combustion Services Ltd exclude all liability for their accuracy or relevance to specific plant or sites who are responsible for carrying out regular risk assessments and introducing site specific procedures.

Contact SAACKE for upgrades, service, spare parts and training.

