Boiler Bottom Blowdown

The following procedure is the recommended steps to use when performing a bottom blowdown on a boiler. This is one method of controlling “TDS” limits within a boiler and should be done as a daily procedure. The amount of blowdown should be per the recommendations of your boiler water treatment specialist, who should be monitoring chemical limits monthly, along with the experience of the boiler operators through daily testing.

The procedures described here are based on a boiler with front and rear bottom blowdown ports. Suggested piping arrangement is for a “quick opening” (lever operated gate style valve) to be located after each bottom drain outlet, followed by a “slow opening” valve (“Y” pattern globe style valve). Use steps “A” to “F” and “J” and “K” if boiler has only one blowdown drain. Adjust your procedure per the actual blowdown arrangement on your boiler.

The “slow opening” valve should be used to do the actual blowdown. The “quick opening” valve should be used as an isolation valve between the boiler bottom drain and the “slow opening” valve only, to prevent possible hydraulic shock damage.

A) Check that the “slow opening” valve is closed. (“Y” pattern globe style valve).

B) Ensure both “quick opening” valves are closed. (lever operated gate style valves).

C) Slowly crack open the front “quick opening” valve. There will be audible sounds of flow as the pressure equalizes between valves. When noise stops, indicating equalization of pressure, open the “quick opening” valve fully.

D) Crack open “slow opening” valve in order to warm up the blowdown line and blowdown separator (if separator is used).

E) When lines and separator are warmed up, open “slow opening” valve fully for the required amount of time per “TDS” test results or the Water Treatment Specialists recommendations. Then fully close the “slow opening” valve.

F) Close the forward “quick opening” valve. (Skip to step “J”, if only one blowdown drain).

G) Slowly crack open rear “quick opening” valve, letting pressure equalize between “quick” and “slow opening “ valves. Then open rear “quick opening” valve fully.

H) Open “slow opening” valve fully for the required amount of time per “TDS” test results or the Water Treatment Specialists recommendations. Then fully close the “slow opening” valve.

I) Close rear “quick opening” valve.

J) Open “slow opening” valve and drain off remaining pressure and water, between “quick” and “slow opening” valves.

K) Close slow opening valve.