How should I prepare my boiler?

In-service (external) inspection:

Preparation for an in-service inspection requires scheduling the inspection for a time when short interruptions of the boiler will not have an adverse impact on the facility’s operations. Facilities with multiple boilers generally do not have as great a concern as those with a single boiler. Also, ensure qualified operators and maintenance personnel are available to conduct any testing of controls and safety devices, as may be required by the inspector. It is also important that all production personnel be notified that an inspection is in progress, let them know when the inspection is complete.

Internal inspection:

Preparation for an internal inspection is more involved since the boiler must be shut down and opened. The following outline provides guidance on preparing your boiler for an internal inspection. These guidelines will vary depending on the jurisdictional requirements and the type of boiler being inspected. Consult with the inspector to determine any additional preparation required. These preparations are very important. If a boiler has not been properly prepared for an internal inspection, the boiler inspector may refuse to make the inspection until the boiler has been properly prepared.
Internal inspection preparation guideline:

1. Shut down the boiler using proper shut down procedures as required by your boiler operating instructions.
2. Lockout and tag all steam, water, and fuel valves, the ignition system and electrical disconnects.
3. Allow the boiler to cool completely, 24 to 48 hours depending on the style and size of the boiler.
4. Open all drain and vent lines and drain the boiler.
5. Remove inspection plugs in water column connectors.
6. Remove all manhole and hand hole cover plates.
7. Remove all washout plugs.
8. Flush all sludge and loose scale from boiler interior. Check with the inspector first as some inspectors prefer to leave scale and sludge in the boiler for their inspection.
9. Open all low-water fuel cutout device float chambers.
10. Open all low-water fuel cutout device cross tee piping plugs.
11. After draining and flushing the boiler, close, lockout, and tag blow off valves.
12. Open all fireside access panels/doors, both front and rear.
13. Remove all soot and ash from boiler furnace surfaces and grates (if applicable). Again, check with the inspector to see if he wants to examine the area before cleaning.
14. Have new gaskets ready for all openings; do not reuse gaskets.
15. Dry Cleaner Boilers such as Columbia, Fulton, etc. - The water level probes must always be removed and cleaned or replaced as necessary. The firebox plug must always be removed to check the firebox area and to make sure the refractory has not broken.

Note: If the inspection requires the inspector physically enter the boiler, employ an appropriate Confined Space Entry Program. This occupational safety regulation applies to everyone involved in the inspection whether they prepare and clean the boiler for inspection, conduct the inspection itself, or do any repair work. Check your state laws, refer to Federal OSHA (29 CFR 1910.146 & .147), or consult with your Boiler Inspector prior to his/her arrival on site.