

GOVT. OF PUNJAB.
DEPARTMENT OF INDUSTRIES & COMMERCE, PUNJAB,
OFFICE OF THE DIRECTOR OF BOILERS, PUNJAB, JALANDHAR.

1. STANDARD ANNUAL INSPECTION PROCEDURE FOR BOILERS.

- a) On the day of annual inspection Boiler should be switched off, empty and thoroughly clean.
- b) All doors of manholes, hand holes, sight holes should be open and mounting, valves should be removed. All smoke tube exterior of water tube, smoke boxes and flues should be cleaned.
- c) Boiler Attendant/Boiler Operation Engineer along with necessary manpower should be deployed.
- d) Carry out thorough visual inspection of boiler inside and outside.
- e) Checking the defects like crack, erosion, corrosion, grooving, bulging, blistering, pitting, deformation of all pressure parts of the boiler. Condition of Stays, Fire Surfaces, Tubes, Ligaments, Fittings, Water Column are also to be checked.
- f) Checking the thickness of pressure parts.
- g) Ensure all existing weld joints area to be free from rust, scale, oil, grease, crack etc.
- h) Checking the general condition of entire existing welding in all pressure parts of the boiler (like Spatter, undercut, Reinforcement, Surface Crack, Leg length, Surface condition etc.
- i) Checking the condition of Mountings and fittings, in terms their working and calibration.
- j) Checking the latest calibration details of existing pressure gauge(s).
- k) Checking the working function of existing blow down valve(s) and condition of fusible plug(s)

2. HYDRAULIC TEST

- a) When a boiler is Hydraulically tested for the first time , it should be cleared of lagging or brick work
- b) Checking the safety valves for its removal and its chest opening blank flanged.
- c) Checking the all doors and fittings for its proper jointing and tightened up.
- d) Checking the calibration certificate and other details of pressure gauge.

- e) Verify the orderliness of inspector's standard pressure gauge before conducting Hydraulic Test to the boiler.
- f) Witnessing Hydraulic Test carried out as per clause 379 of Indian Boiler Regulations.
- g) Checking the Deflection, Distortion & extension if any to pressure parts during Hydraulic Test.
- h) Thorough Checking of the pressure parts during Hydraulic Test for detecting any leakage or sweating.
- g) The boiler shall satisfactorily withstand such test pressure without appreciable leakage or undue deflection or distortion of its parts. In case the test is not satisfactory either the allowed working pressure should be suitably reduced or desired alterations/rectifications are made and boiler should be re-examined for successful Hydraulic Test.

NOTE:- For boilers used exclusively in Electric Power Generation, for Captive Boilers and Waste Heat Boilers (fired and unfired) used exclusively in continuous process plants, the inspection should be carried out in accordance with the provisions of Appendix JA and JB as the case may be.

3. STEAM TEST

- a) Every newly registered boiler and every other boiler for which working pressure has been altered, before the issue of original or renewal certificate, shall be tested under steam.
- b) Verify the orderliness of inspector's standard pressure gauge for checking the pressure in the already installed pressure gauge on the boiler.
- c) Checking the feed apparatus for its capability of supplying sufficient water to the boiler.
- d) Witnessing the Steam test as per clause 380 of Indian Boiler Regulations.
- e) Checking the Popping Pressure, reset pressure, percentage Blow Down, Accumulation, Lift, Chattering etc. during Steam Test.
- f) Checking the performance of all Mountings and fittings during Steam Test.