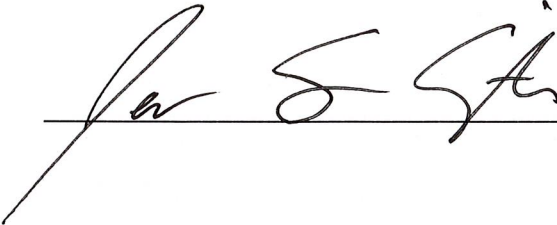


# Inspection of Used Boilers and Pressure Vessels

## BSB 0600-03

Prepared by: Jeremy Smith

  
Date: **12/01/2021**

Approved by: Don Kinney

  
Date: **12/01/2021**

BOILER SAFETY BUREAU

STANDARD OPERATING PROCEDURE

## 1.0 Purpose

- 1.1 The purpose of this procedure is to provide guidelines for the inspection of used boilers and pressure vessels that have not been previously registered in North Carolina. This will aid the inspector in performing thorough and effective inspections which will promote the safe operation of the object(s).

## 2.0 Scope

- 2.1 This procedure applies to used boilers and pressure vessels that are required to have a North Carolina inspection certificate and have not been previously inspected by a NC Commissioned Inspector.

## 3.0 Personnel Responsibilities

- 3.1 The Bureau Chief has the overall responsibility for the implementation of this procedure.
- 3.2 The Assistant Bureau Chief is designated as the primary document custodian and is responsible for the control and review of this document.
- 3.3 The Inspector Supervisors are responsible for ensuring the inspectors use this instruction, as a minimum, in their inspections
- 3.4 The Commissioned Inspector shall follow these guidelines to effectively inspect used objects.

## 4.0 Health and Safety Issues

- 4.1 This procedure is intended to promote the safety of the inspectors conducting the inspections, as well as that of the employees and public where these objects are located.
- 4.2 The inspector may be subject to tight spaces during internal inspections of High-Pressure boilers. The inspector shall use caution entering these areas, ensuring the environment is safe to enter and utilizing an attendant if necessary. The inspector must reference BSB 0200-07 Confined Space Entry and BSB 0200-08 Tagout/Lockout Procedures when applicable.

## 5.0 Procedure

- 5.1 Inspection of High-Pressure Boilers:
  - 5.1.1 An internal inspection shall be completed per 13 NCAC 13.0211 and prepared per 13 NCAC 13.0212 of the NC Boiler and Pressure Vessel Administrative Rules.
  - 5.1.2 A Hydrostatic test shall be performed at 1.5 times the MAWP of the Boiler.
    - 5.1.2.1 The Hydrostatic test should be witnessed by a Commissioned Inspector.
    - 5.1.2.2 If the Hydrostatic test has been performed without the Inspector present, a test report must be presented to the satisfaction of the Inspector.
    - 5.1.2.3 The Hydrostatic test shall be performed at installation, or within 12-months of the installation request.**
    - 5.1.2.4 Test report shall contain, at a minimum: National Board number, test date, test pressure (PSI), duration of hold pressure for test, results of test, and completed by service company, installing company, or owner of boiler.
  - 5.1.3 An operational external inspection shall be completed to check operation of controls and safety devices required by 13 NCAC 13.0404 of the NC Boiler and Pressure Vessel Administrative Rules.
  - 5.1.4 External inspection of the overall condition and material of the boiler shall be completed to check integrity of the boiler.
  - 5.1.5 A Manufacturers Data report will be provided to the inspector to utilize during the inspection to ensure the boiler being inspected is consistent with the Data report (i.e. # of nozzles, # of manways, # of sections, etc.)

- 5.1.6 If any repairs or alterations have been done on the boiler, the R-1 form for repairs and R-2 form for alterations will be provided to the inspector. The inspector will utilize those forms to compare to the boiler, ensuring the repairs or alterations are consistent with the boiler.
- 5.1.7 Out-of-State Inspection reports may be provided to the inspector to utilize during the inspection when available.
- 5.2 Inspection of Low-Pressure Boilers:
  - 5.2.1 An operational external inspection shall be completed to check operation of controls and safety devices required by 13 NCAC 13.0404 of the NC Boiler and Pressure Vessel Administrative Rules.
  - 5.2.2 External inspection of the overall condition and material of the boiler shall be completed to ensure the integrity of the boiler for operation.
  - 5.2.3 ***A Manufacturers Data report may be provided to the inspector to utilize during the inspection to ensure the boiler being inspected is consistent with the Data report (i.e., # of nozzles, # of manways, # of sections, etc.)***
- 5.3 Inspection of Pressure Vessels:
  - 5.3.1 An operational external inspection shall be completed to check for operation of controls and safety devices on the Pressure Vessel per 13 NCAC 13.0404 of the NC Boiler and Pressure Vessel Administrative Rules.
  - 5.3.2 External inspection of the overall condition and material of the pressure vessel shall be completed to ensure the integrity of the vessel for operation.
  - 5.3.3 ***A Manufacturers Data report may be provided to the inspector to utilize during the inspection to ensure the boiler being inspected is consistent with the Data report (i.e., # of nozzles, # of manways, # of sections, etc.)***

## 6.0 Customer Service Requirements

- 6.1 This procedure is intended to provide the customer, be it the public, employees of the Bureau, or other State agencies, with the most efficient service, information, training and assistance possible.

## 7.0 Data and Record Management

- 7.1 The Inspector shall complete an inspection report (Form BB-101) for the Internal and/or External inspections to document the results of the inspections including the Hydrostatic test. Any violations shall be detailed on the report.
- 7.2 All documents referenced in this procedure shall be maintained in accordance with the Functional Schedule for North Carolina State Agencies as adopted by State Archives, a Division of North Carolina Department of Natural and Cultural Resources.