

## 5.7 STAMPING REQUIREMENTS FOR REPAIRS AND ALTERATIONS

### 5.7.1 GENERAL

The stamping of or attachment of a nameplate to a pressure-retaining item shall indicate that the work was performed in accordance with the requirements of this Code. Such stamping or attaching of a nameplate shall be done only with the knowledge and authorization of the inspector. The "R" Certificate Holder responsible for the repair or the construction portion of the alteration shall apply the stamping. For a rerating where no physical changes are made to the pressure-retaining item, the "R" Certificate Holder responsible for design shall apply the stamping.

### 5.7.2 STAMPING REQUIREMENTS FOR REPAIRS

- a) Pressure-retaining items repaired in accordance with the NBIC shall be stamped as required by this section.
- b) Subject to the acceptance of the Jurisdiction and the concurrence of the Inspector, nameplates and stamping may not be required for routine repairs (see 3.3.2). In all cases, the type and extent of repairs necessary shall be considered prior to waiving the requirement.
- c) Stamping or nameplate shall be applied adjacent to the original manufacturer's stamping or nameplate. A single repair nameplate or stamping may be used for more than one repair to a pressure-retaining item, provided each is carried out by the same certificate holder. The date of each repair, corresponding with the date on associated Form R-1, shall be stamped on the nameplate.

### 5.7.3 STAMPING REQUIREMENTS FOR ALTERATIONS

Pressure-retaining items altered in accordance with this code shall have a nameplate or stamping applied adjacent to the original manufacturer's stamping or nameplate in accordance with this section.

For an alteration where physical changes are made to the pressure-retaining item, the "R" Certificate Holder responsible for the construction portion of the alteration shall apply the stamping or nameplate. For an alteration where no physical changes are made to the pressure-retaining item (e.g., re-rating) the "R" Certificate Holder, assuming responsibility for the design, shall apply the stamping or nameplate.

### 5.7.4 STAMPING REQUIREMENTS FOR PARTS

Stamping or nameplate shall be applied in a conspicuous location on the part.

### 5.7.5 SPECIFIC REQUIREMENTS FOR STAMPING AND NAMEPLATES

- a) Required data shall be in characters of at least 5/32 in. (4 mm) high, except that characters for pressure relief valve repair nameplates may be smaller. Markings may be produced by casting, etching, embossing, debossing, stamping, or engraving. The selected method shall not result in any harmful contamination of or sharp discontinuities to the pressure-retaining item. See Figures 5.7.5-a thru 5.7.5-g.
- b) The National Board code symbols ("R," "VR," and "NR") are to be stamped; do not emboss.
- c) Stamping directly on items, when used, shall be done with blunt-nose continuous or blunt-nose interrupted dot die stamps. If direct stamping would be detrimental to the item, required markings may appear on a nameplate affixed to the item.
- d) The Certificate Holder shall use its full name as shown on the *Certificate of Authorization* or an abbreviation acceptable to the National Board.
- e) The letters "RP" shall be stamped below the "R" symbol stamp to indicate organizations accredited for performing repairs or alterations to fiber-reinforced plastic items.
- f) The letter "G" shall be stamped below the

"R" symbol stamp to indicate organizations accredited for performing repairs or alterations to graphite pressure equipment.

#### 5.8 STAMPING FOR FIBERREINFORCED VESSELS

The attaching of a nameplate to a repaired or altered vessel or tank shall indicate that the work was performed in accordance with the requirements of this Code. The attachment of a nameplate shall be done only with the knowledge and authorization of the Inspector. The Certificate Holder responsible for the repair or alteration shall apply the stamping nameplate. Required stamping and nameplate information are shown in NBIC, Part 3, 5.7.

##### 5.8.1 STAMPING FOR REPAIRS

Pressure-retaining items repaired in accordance with the NBIC shall have a nameplate as required by Section 5.7. Subject to the acceptance of the jurisdiction and the concurrence of the Inspector, nameplates may not be required for routine repairs. (See 5.7.2 [b]). In all cases, the type and extent of repairs necessary shall be considered prior to waiving the requirement.

##### 5.8.2 STAMPING FOR ALTERATIONS

The nameplate shall be applied in accordance with Section 5.7. The location of the nameplate shall be documented on the Form R-2.

#### 5.9 STAMPING REQUIREMENTS FOR YANKEE DRYERS

a) Stamping is not required for repairs that do not affect the pressure-retaining capability of the Yankee shell, as indicated on the De-rate Curve, or other pressure-retaining parts, as indicated on the original Manufacturer's Data Report.

b) Stamping is required for repairs that do affect the pressure-retaining capability of the Yankee shell, as indicated on the De-rate Curve, or other pressure-retaining parts as indicated on the original Manufacturer's Data Report.

c) Stamping is required for alterations as listed in Supplement S5.7.2

d) Stamping, when required, shall meet the requirements for stamping in 5.7.3. The location of stamping shall be described in the "remarks" section of Form R-2.

#### 5.10 ALTERNATIVE MARKING AND STAMPING FOR GRAPHITE PRESSURE EQUIPMENT

##### a) General Requirements

- 1) This procedure may be used in lieu of the stamping and nameplate requirements defined in this section.
- 2) The required data as defined in this section shall be 5/32 in. (4 mm) high, minimum.
- 3) The National Board code symbol ("R") shall be used to make the impression in the cement.

##### b) Application of the "R" Code Symbol

- 1) The graphite surface shall be clean and smooth.
- 2) Apply a thin coating of cement onto the Code part. The cement should have the consistency of toothpaste.
- 3) Apply sufficient heat to the cement so that it begins to form a skin.
- 4) Apply a coating of a thinned release agent, such as "ANTISEIZE," to the tip of the "R" stamp with a brush.
- 5) Press the coated stamp all the way to the bottom of the cement and remove by pulling straight out before the cement hardens.
- 6) Cure or heat the impression as required.
- 7) When cured, the part may be washed to remove any excess release agent.

##### c) Application of characters directly to graphite

- 1) Use a very thin template of a flexible material (stainless steel; flexible and easily cleaned).
- 2) Place the template over a clean smooth surface.
- 3) Hold the template securely and trowel over with approved cement to fill all of the template area.
- 4) Carefully lift the template from the graphite part and examine the detail of the characters.
- 5) If acceptable, cure the cement.
- 6) If the characters are incorrect or damaged, wipe off the cement with a compatible solvent and reapply.

**Note:** The preceding methods can be applied jointly to identify the graphite part and to transfer the "R" stamp.

#### 5.11 REMOVAL OF ORIGINAL STAMPING OR NAMEPLATE

If it becomes necessary to remove the original stamping, the Inspector shall, subject to the approval of the Jurisdiction, witness the making of a facsimile of the stamping, the obliteration of the old stamping, and the transfer of the stamping to the new item. When the stamping is on a nameplate, the Inspector shall witness the transfer of the nameplate to the new location. Any relocation shall be described on the applicable NBIC form. The restamping or replacement of a code symbol stamp shall be performed only as permitted by the governing code of construction.

#### 5.12 STAMPING REQUIREMENTS FOR PRESSURE RELIEF DEVICES

##### 5.12.1 NAMEPLATES

Proper marking and identification of tested or repaired valves is critical to ensuring acceptance during subsequent inspections, and also provide for traceability and identification of any changes made to the valve. All operations that require the valve's seals to be replaced shall be identified by a nameplate as described in 5.12.2 or 5.12.4.

##### 5.12.2 REPAIR NAMEPLATE

When a pressure relief valve is repaired, a metal repair nameplate stamped with the information required below shall be securely attached to the valve adjacent to the original manufacturer's stamping or nameplate. If not mounted directly on the valve, the nameplate shall be securely attached so as not to interfere with valve operation and sealed in accordance with the quality system.

- a) Prior to attachment of the repair nameplate, the previous repair nameplate, if applicable, shall be removed from the repaired valve.
- b) As a minimum, the information on the valve repair nameplate (see Figure 5.7.5-e) shall include:
  - 1) The name of the repair organization preceded by the words "repaired by";
  - 2) The "VR" repair symbol stamp and the "VR" Certificate Number;
  - 3) Unique identifier (e.g., repair serial number, shop order number, etc.);
  - 4) Date of repair;
  - 5) Set pressure;
- 6) Capacity and capacity units (if changed from original nameplate due to set pressure or service fluid change);
- 7) Type/Model number (if changed from original nameplate by a conversion. See Supplement S7.2); and
- 8) When an adjustment is made to correct for service conditions of superimposed back pressure and/or temperature or the differential between popping pressure between steam and air (see 4.5.2), the information on the valve repair nameplate shall include the:
  - a. Cold Differential Test Pressure (CDTP), and
  - b. Superimposed Back Pressure (BP) (only when applicable).

### 5.12.3 CHANGES TO ORIGINAL PRESSURE RELIEF VALVE NAMEPLATE INFORMATION

- a) If the set pressure is changed, the set pressure, capacity, and blowdown, if applicable, on the original nameplate or stamping shall be marked out but left legible. The new capacity shall be based on that for which the valve was originally certified.
- b) If the service fluid is changed, the capacity, including units, on the original nameplate or stamping shall be marked out but left legible. The new capacity shall be based on that for which the valve was originally certified, or if a conversion has been made, as described in Supplement S7.2 on the capacity certification for the valve as converted.
- c) If the Type/Model number is changed, the Type/Model number on the original nameplate shall be marked out but left legible.
- d) If the blowdown is changed, the blowdown on the original nameplate or stamping shall be marked out but left legible. The new blowdown may be based on the current ASME Code requirements.
- e) Incorrect information on the original Manufacturer's nameplate shall be marked out but left legible. Corrected information shall be indicated on the repair nameplate and noted on the document as required by the quality system.

### 5.12.4 TEST ONLY NAMEPLATE

- a) Where a valve has been tested and adjusted, as permitted by Supplement S7.10.1, but not otherwise repaired, a "Test Only" nameplate shall be applied that contains the following information:
  - 1) Name of responsible organization;
  - 2) Date of test;

- 3) Set Pressure; and
- 4) Identification, such as "Test Only."

- b) A "test only" nameplate is also recommended when periodic testing has been performed, even when no adjustments have been made, for the purpose of identifying the date the valve was tested.
- c) The existing repair nameplates, if applicable, shall not be removed during such testing.

### 5.12.5 REPLACEMENT OF ILLEGIBLE OR MISSING NAMEPLATES

- a) Illegible Nameplates  
When the information on the original manufacturer's or assembler's nameplate or stamping is illegible, but traceability can be confirmed, the nameplate or stamping will be augmented ~~or replaced~~ by a nameplate furnished by the "VR" stamp holder stamped "duplicate." It shall contain all information that originally appeared on the nameplate or valve, as required by the applicable section of the ASME Code, except the "V," "HV," or "UV" symbol and the National Board mark. The repair organization's nameplate, with the "VR" stamp and other required data specified in 5.12.2, will make the repairer responsible to the owner and the Jurisdiction that the information on the duplicate nameplate is correct.
- b) Missing Nameplates  
When the original valve nameplate is missing, the repair organization is not authorized to perform repairs to the valve under the "VR" program, unless positive identification can be made to that specific valve and verification that the valve was originally stamped with an ASME "V" or "UV" symbol or marked with an ASME "HV" symbol. Valves that can be positively identified will be equipped with a duplicate nameplate, as described in this section, in addition to the repairer's "VR"-stamped nameplate. The repairer's responsibilities for accurate data, as defined in 5.12.5(a) (Illegible Nameplates), shall apply.
- c) Marking of Original Code Stamp  
When a duplicate nameplate is affixed to a valve, as required by this section, it shall be marked "Sec. I," "Sec. IV," or "Sec. VIII," as

applicable, to indicate the original ASME  
Code stamping.