



STATE OF WASHINGTON
DEPARTMENT OF LABOR AND INDUSTRIES

Field Services & Public Safety
Boiler/Pressure Vessel Program
PO Box 44410 • Olympia, Washington 98504-4410
ATTENTION: IMPORTANT NOTICE

****Mandatory Jurisdictional Requirement - April 1, 2018****

TO: All Washington State Commissioned Boiler/Pressure Vessel Inservice Inspectors

FROM: Tony Oda, Chief Boiler Inspector
State of Washington, Department of Labor & Industries

DATE: February 23, 2018

SUBJECT: External and Internal Inspection requirements for air receiver tanks less than 36" ID (typically 40 gallons to 400 gallons in capacity) in corrosive service, per RCW 70.79.240 (3) and WAC 296-104-100 (5)(b)(i).

Air receivers are subject to internal corrosion due to water being entrained during the air compression process. Water in the atmospheric air enters the receiver tank and may cause corrosion, especially if the water is not drained.

External Inspections Requirements:

- Verify Nameplate information (MAWP, NB Number, MFG, Year built, etc.)
- Inspect all Welds.
 - Especially attachment welds on brackets and support legs.
 - Check high stress points for cracking of welds or shell/head materials.
- Check Shell and Heads for corrosion, dents, gouges, or hot spots.
- Check condition and accuracy of pressure gages.
- Verify MAWP, capacity and operation of safety device.
- Verify existence and functionality of manual or automatic condensate drain.

Internal Inspection Requirements:

- To satisfy internal inspection requirements for air receivers in corrosive service, Inservice Inspectors will have two options:
 1. Have the air receiver taken out of service for a thorough visual internal inspection.
 2. The Inservice Inspector may choose to use UT testing to satisfy the “internal inspection” requirement as defined in WAC 296-104-010 for vessels less than 36” ID. The original wall thickness is defined as the wall thickness as specified on nameplate or the Manufacturer’s Data Report.

The Inservice Inspector shall as a minimum, report the lowest UT readings obtained on the heads and shell, along with the date and their name/initials, for each inspection cycle in the Object Comments in JO.

- UT inspection guidelines:
 - Line or crevice corrosion – The depth of corrosion shall not exceed **25%** of the original wall thickness. The total length does not exceed 2 linear inches.
 - General corrosion - The depth of corrosion shall not exceed **25%** of the original wall thickness.
 - Isolated pits - The depth of corrosion for individual pits shall not exceed **50%** of the original wall thickness. The total area of the pits does not exceed 7 square inches within any 50 square inch area.

If the corrosion exceeds any of the above criteria, the Inservice Inspector shall submit a **non-compliance report** documenting the deteriorated condition and the owner/user will have the following corrective action options:

1. If the owner/user disagrees with the Inspectors UT results, they may contract with a qualified NDE organization to conduct a complete UT survey of the vessel to verify the actual remaining vessel wall thickness. If the NDE organization’s UT readings are above the UT Inspection guidelines listed above, the air receiver may continue in service. If the NDE organization’s UT readings are below the UT Inspection guidelines listed above, the owner/user can use option 3 or 4.
2. A fitness-for service analysis can performed by a qualified organization to verify air receiver is satisfactory for continued service. If the analysis does not allow for continued service, the owner/user can use option 3 or 4.
3. A NB “R” stamp holder shall repair the air receiver.

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4. The air receiver is unfit for service and shall be replaced as soon as possible not to exceed 30 days.

****The Inservice Authorized Inspection Agency of record will be responsible for insuring their Inservice Inspectors are adequately trained and equipped with the appropriate UT testing device.**

****As of April 1, 2018, for air receivers addressed in this memo, the required "Certificate of Inspection" will be issued on submission of Internal Inspections ONLY.**

****External Inspection requirements of WAC 296-104-100 will be documented in the Inspection comments at the time the internal inspections are submitted to JO.**