**ASME B31.1 104.7.2 Other Unlisted Component Evaluation**

Does component specifically fall into the 104.1 *Straight Pipe*, 104.2 *Curved and Mitered Segments of Pipe*, 104.3 *Intersections*, 104.4 *Closures*, 104.5 *Pressure Design of Flanges and Blanks*, or 104.6 *Reducer*s? If so, evaluate per that paragraph.

Does the component fall into 104.7 *Other* *Pressure-Containing Components*, specifically 104.7.2 *Specially Designed Components*? If so evaluate per the following:

|  |  |  |
| --- | --- | --- |
| **Item** | **Requirement** | **Completed (attached)** |
| A | Extensive, successful service experience under comparable conditions with similarly proportioned components of the same or similar material. |  |
| B | Experimental stress analysis, such as described in the *ASME Boiler and Pressure Vessel Code*, Section VIII, Division 2, Annex 5-F.  |  |
| C | Proof test in accordance with either ASME B16.9; MSS SP-97; or the *ASME Boiler and Pressure Vessel Code*, Section I, A-22. |  |
| D | Detailed stress analysis, such as finite element method, in accordance with the *ASME Boiler and Pressure Vessel Code*, Section VIII, Division 2, Part 5, except that the basic material allowable stress from the allowable stress tables of Mandatory Appendix A shall be used in place of Sm. |  |

\* Note: Code references herein are based on the 2016 edition. Modify as necessary to align with newer editions.

For any of (A) through (D) above, it is permissible to interpolate between sizes, wall thicknesses, and pressure classes and to determine analogies among related materials. Calculations and documentation showing compliance with this paragraph shall be available for the owner’s approval, and, for boiler external piping, they shall be available for the Authorized Inspector’s review.

Evaluated By: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_

CPSO Approval: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_