

Information Bulletin No. IB14-014

December 9, 2014

INTERPRETATION

Acceptance of Initial Service Leak Test for Pressure Piping in Category D Fluid Service as part of the Piping Design Registration

This interpretation clarifies the conditions under which a service leak test conducted in accordance with the provisions of ASME B31.3 paragraphs 345.1(a) and 345.7.2 may be accepted as part of a piping design registration submission as an alternative test method in accordance with Section 30(2) of the PESR.

ABSA document AB-519 *Pressure Piping Alternative Test Methods Procedure Requirements* provides guidance for service leak testing controlled under an Owner-User Pressure Equipment Integrity Management System. Service leak testing carried out under an accepted owner-user procedure does not need to be included in the piping design registration.

Background

Pressure Equipment Safety Regulation (PESR AR49/2006) Section 30 requires:

- (1) all pressure piping leak tests must be conducted using the hydrostatic method; or*
- (2) despite subsection (1), the Administrator may accept, for a specific pressure piping system, alternative test methods that are allowed in a code or standard that is declared in force.*

ASME B31.3 paragraph 345.1(a) allows:

At the owner's option, a piping system in Category D fluid service may be subjected to an initial service leak test in accordance with para. 345.7, in lieu of the hydrostatic leak test.

ASME B31.3 paragraph 345.7.2 provides, at the owner's option, that the initial service leak test for Category D fluid may be conducted using the service fluid at the operating pressure rather than at the design pressure of the line.

Users are cautioned that accepting a service leak test means the piping system will not have been leak tested to its design pressure, nor to a pressure equal to or greater than the pressure relief device set pressure. A risk assessment should be completed to justify the use of a service leak test.

Interpretation

An initial service leak test conducted in accordance with the provisions of ASME B31.3 paragraphs 345.1(a) and 345.7.2 may be accepted as an alternative leak test as part of a piping design registration under the following conditions:

- Pressure piping shall be limited to Category D Fluid Service having the physical properties and design condition limitations as defined in ASME B31.3 paragraph 300.2;
- Materials are limited to P-1 and P-8;
- Pipe size is limited to DN 200 (NPS 8) and smaller;
- Nominal pipe wall thickness shall be schedule STD or greater;
- For schedule STD pipe, not more than 3.2 mm (0.125") of the nominal wall thickness shall be used for corrosion allowance. Greater corrosion allowance may be permitted for pipe wall thickness greater than schedule STD;
- The design registration submission must include written confirmation from the owner that they are exercising their option to do a service leak test in accordance with ASME B31.3 paragraph 345.1(a); and
- The affected piping circuits shall be clearly marked in the line list submitted for registration indicating that they will be subjected to an initial service leak test.

Service leak testing of pressure piping circuits in Category D Fluid Service that do not meet the material, size and thickness limits provided in this Information Bulletin may be considered for acceptance on a case-by-case basis provided additional justification is provided with the design submission.

<original signed by>

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