Information Bulletin No. IB24-010 **October 10, 2024**

INTERPRETATION
Requirements for
Pneumatic Test Procedures

This Information Bulletin replaces IB23-016 which has been withdrawn.

This Information Bulletin establishes requirements for ***application-specific*** pneumatic test procedures and for ***standard*** pneumatic test procedures.

Application-Specific Pneumatic Test Procedure Requirements for Pressure Vessels and Pressure Piping Systems

As provided for under Subsections 15(1)(j), 16(1)(g), 30(2) and 40(3) of the Pressure Equipment Safety Regulation (PESR), this Information Bulletin establishes that ABSA document AB-532 "*Design Registration Requirements for Application-Specific Pneumatic Test Procedures"* Edition 2, Revision 0 Issued 2024-10-10 (hereunder referred to as AB-532) specifies information that must be submitted with the design registration documents when a pneumatic test is to be conducted on a new or repaired pressure vessel or pressure piping system.

AB-532 applies to fabricators, pressure equipment owners, and other stakeholders.

AB-532 establishes the minimum procedure requirements that must be addressed in an application-specific pneumatic test procedure to be developed by an organization and used under their valid certificate of authorization permit. AB-532 provides guidance to persons responsible for developing and implementing the organization's procedure required to conduct an application-specific pneumatic test of a pressure vessel or pressure piping system.

Standard Pneumatic Test Procedures Requirements for pressure piping systems

As provided for under Subsection 30(2) of the PESR, the Administrator may accept pneumatic testing of pressure piping systems. This Information Bulletin establishes that a standard pneumatic test of pressure piping systems may be conducted in accordance with the provisions of ABSA document AB-522 *Standard Pneumatic Test Procedure Requirements for Piping Systems* [note 1] Edition 3 Revision 0 Issued 2023-04-18 (hereunder referred to as AB-522). A registered application-specific test procedure is required if the pneumatic test procedure does not conform to AB-522.

AB-522 applies to fabricators, pressure equipment owners, and other stakeholders.

AB-522 may be applied for the pneumatic testing of pressure piping systems up to 1,677 kJ of stored energy (equivalent to 500 liters internal volume and 2,172 kPa internal pressure) provided that:

- the standard pneumatic test procedure is included in the written description of a QMS in accordance with the provisions of Sections 12 and 13 of the PESR, and
- the description/procedure complies with the requirements of the AB-522 and has been accepted by ABSA.

AB-522 establishes the minimum procedure requirements that must be addressed in a standard pneumatic test procedure to be developed by an organization and used under their valid certificate of authorization permit. AB-522 provides guidance to persons responsible for developing and implementing the organization's procedure required to conduct a standard pneumatic test of a pressure piping system.

Previously Accepted Pneumatic Test Procedures for Pressure Piping Systems only

The requirements listed in AB-518, "*Pressure Piping Construction Requirements*", and AB-519, "*Pressure Piping Alternative Test Methods Procedure Requirements*", provide provisions for pneumatic testing for pressure piping systems as part of a QMS. The pneumatic test procedures previously accepted for use or registered under these provisions are required to be updated to meet the current AB-522 or AB-532, as applicable. The update shall be done before the next use of the procedure but not later than the next audit of the quality program.

Background:

Pneumatic testing of new or repaired pressure equipment is considered to be part of the construction or repair, and as such must follow the registered procedure that meets the requirements of AB-532 and must be conducted by an organization that holds a certificate of authorization permit in accordance with Sections 11, 12, and 13 of the PESR. The organization's QMS must address pneumatic testing.

Construction codes for pressure vessels and pressure piping systems require pressure testing once fabrication is completed. Similarly, repairs and alterations that require physical fabrication to the pressure boundary or alterations that increases the required thickness due to an increase of pressure require pressure testing. Hydrostatic pressure testing with water is the preferred method, as pneumatic testing is inherently more hazardous than a hydrostatic test of the same volume, pressure, and temperature. However, a pneumatic pressure test is sometimes selected by the Manufacturer or the owner. The intention of the AB-522 and AB-532 documents is to provide compliance guidance to help assure pneumatic testing is done safely.

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note 1 See AB-522 for definition of standard pneumatic test