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PST Technical Bulletin D100-E
Procedure for Hydrostatic Retesting of Hot Dip Galvanized Scuba Cylinder Revised 1/01/03

Steel scuba cylinders manufactured by PST must be re-inspected and retested at least every five years in accordance with the Code of Federal regulations Title 49 CFR 173.34 (US) or CSA B339 (Canada).

This bulletin describes procedures that must be performed prior to retesting each cylinder. The cylinder must be prepared and test system checked in order to obtain accurate results in the hydrostatic expansion retest for galvanized steel cylinders. All PST scuba cylinders made starting in 1952 are protected from corrosion by a hot dip galvanized coating. This hot dip galvanized coating may affect the readings from the hydrostatic test, therefore failure to prepare the cylinder and perform the test system check in accordance with this procedure may result in rejection of a perfectly acceptable cylinder.

Cylinder Preparation Procedure:

1. Remove the plastic boot.
2. Remove any crusty white corrosion deposits. Crusty deposits are most likely to form inside the removable plastic boot if the owner has not routinely rinsed saltwater residue from this area.
3. Do not use aggressive acidic or caustic metal cleaners on the galvanized surface. The mottled gray-white appearance of used galvanized cylinders is normal.

Test System Check Procedure :

1. Visually inspect the cylinder, fill it with water and place in the water jacket, as in your normal practice for any testing.
2. Zero the burette or expansion measuring system and pressurize the cylinder to 85% to 90% of the prescribed test pressure. **Warning: DO NOT EXCEED 90% [49 CFR 173.34(e)(4)(v)] of test pressure.**
3. Hold the pressure and determine that the system is free of leaks.
4. Release the pressure to zero.
5. Zero the burette if necessary.
6. Proceed to retest the cylinder at the required test pressure.
7. Repeat this procedure with each hot dip galvanized cylinder to be tested.

This test system check procedure is specifically authorized under the provisions of **49 CFR 173.34 (e)(4)(v) and CGA C-1, Methods for Hydrostatic Retesting, 1.4.**

This procedure is necessary to obtain accurate test results. The provision of the PST Warranty therefore requires that the cylinders are prepared for test and the system check is performed in accordance with these procedures. If these procedures are not followed in the retesting of hot dip galvanized cylinders, the owner should be given prior notice by the retester that the warranty may be invalidated by the retester.

Related test bulletin PST Bulletin D101-E, Retesting DOT-E9791 or TC-SU 4349 Advanced Technology Cylinders. PST high-pressure (3442-psi) cylinders have a special test requirement based on their design and the DOT/TC requirements. This bulletin provides the necessary information. Following this procedure will assure an accurate retest for PST scuba cylinders. If you experience any difficulty in obtaining acceptable readings, please contact PST customer service at 414-476-0500.

PST TECHNICAL BULLETIN D101-E
Retesting DOT-E9791 or TC-SU4349-230 Advanced Technology Cylinders. Revised 01/01/03

High-pressure steel scuba cylinders manufactured by PST must be re-inspected and retested at least every five years in accordance with the Code of Federal Regulations Title 49 CFR 173.34(US) or CSA B339 (Canada).

PST high-pressure (3442 psi) cylinders must be retested in accordance with DOT -E9791 or TC-SU4349-230 and have special test requirements based on their design and the DOT/TC requirements. This bulletin provides the necessary information.

1. The retester must have a current copy either DOT-E9791 or TC-SU4349-230.
2. The test pressure is 5250 psi.
3. The wall calculations of CGA-C6 are not applicable to these high-strength steel cylinders. For the purpose of inspection criteria, the minimum wall for a new E7 cylinder is .179 inch, and E8 is .197.
4. Almost all PST high-pressure scuba cylinders are hot dip galvanized for protection from corrosion. Specific procedures must be followed for cylinder preparation and retest checks to obtain accurate results in retesting hot-dip galvanized cylinders. These are described in **PST Bulletin D100-E, Procedures for Hydrostatic Retesting for Hot Dip Galvanized Scuba Cylinders.**

Following these procedures will ensure an accurate retest for PST scuba cylinders. If you experience any difficulty in obtaining an acceptable reading, please contact PST customer service at 414-476-0500.

These bulletins are provided free to all retesters approved by the US DOT or Transport Canada.