

(2) *Pressure test and visual inspection records.* The date of requalification; serial number; DOT specification or exemption number; marked pressure; actual dimensions; manufacturer's name or symbol; owner's name or symbol, if present; result of visual inspection; actual test pressure; total, elastic and permanent expansions; percent permanent expansion; disposition, with reason for any repeated test, rejection or condemnation; and legible identification of test operator. For each cylinder marked pursuant to §173.302a(b)(5) of this subchapter, the test sheet must indicate the method by which any average or maximum wall stress was computed. Records must be kept for all completed, as well as unsuccessful tests. The entry for a second test after a failure to hold test pressure must indicate the date of the earlier test.

(3) *Wall stress.* Calculations of average and maximum wall stress pursuant to §173.302a(b)(3) of this subchapter, if performed.

(4) *Calibration certificates.* The most recent certificate of calibration must be maintained for each calibrated cylinder.

(c) *Repair, rebuilding or reheat treatment records.* (1) Records covering welding or brazing repairs, rebuilding or reheat treating shall be retained for a minimum of fifteen years by the approved facility.

(2) A record of rebuilding, in accordance with §180.211(d), must be completed for each cylinder rebuilt. The record must be clear, legible, and contain the following information:

(i) Name and address of test facility, date of test report, and name of original manufacturer;

(ii) Marks stamped on cylinder to include specification number, service pressure, serial number, symbol of manufacturer, inspector's mark, and other marks, if any;

(iii) Cylinder outside diameter and length in inches;

(iv) Rebuild process (welded, brazed, type seams, etc.);

(v) Description of assembly and any attachments replaced (e.g., neckrings, footrings);

(vi) Chemical analysis of material for the cylinder, including seat and Code No., type of analysis (ladle, check),

chemical components (Carbon (C), Phosphorous (P), Sulfur (S), Silicon (Si), Manganese (Mn), Nickel (Ni), Chromium (Cr), Molybdenum (Mo), Copper (Cu), Aluminum (Al), Zinc (Zn)), material manufacturer, name of person performing the analysis, results of physical tests of material for cylinder (yield strength (psi), tensile strength (psi), elongation percentage (inches), reduction in area percentage, weld bend, tensile bend, name of inspector);

(vii) Results of proof pressure test on cylinder, including test method, test pressure, total expansion, permanent expansion, elastic expansion, percent permanent expansion (permanent expansion may not exceed ten percent (10%) of total expansion), and volumetric capacity (volumetric capacity of a rebuilt cylinder must be within \pm 3% of the calculated capacity);

(viii) Each report must include the following certification statement: "I certify that this rebuilt cylinder is accurately represented by the data above and conforms to all of the requirements in Subchapter C of Chapter I of Title 49 of the Code of Federal Regulations.". The certification must be signed by the rebuild technician and principal, officer, or partner of the rebuild facility.

[67 FR 51660, Aug. 8, 2002, as amended at 68 FR 24664, May 8, 2003]

Subpart D—Qualification and Maintenance of IBCs

SOURCE: Amdt. 180-5, 59 FR 38079, July 26, 1994, unless otherwise noted.

§ 180.350 Applicability and definitions.

This subpart prescribes requirements, in addition to those contained in parts 107, 171, 172, 173 and 178 of this subchapter, applicable to any person responsible for the continuing qualification, maintenance, or periodic retesting of an IBC. The following definitions apply:

(a) *Remanufactured IBCs* are metal, rigid plastic or composite IBCs produced as a UN type from a non-UN type, or are converted from one UN design type to another UN design type. Remanufactured IBCs are subject to

the same requirements of this subchapter that apply to new IBCs of the same type (also see §178.801(c)(1) of this subchapter for design type definition).

(b) *Repaired IBCs* are metal, rigid plastic or composite IBCs that, as a result of impact or for any other cause (such as corrosion, embrittlement or other evidence of reduced strength as compared to the design type), are restored so as to conform to the design type and to be able to withstand the design type tests. For the purposes of this subchapter, the replacement of the rigid inner receptacle of a composite IBC with a receptacle conforming to the original manufacturer's specification is considered repair. Routine maintenance of IBCs (see definition in paragraph (c) of this section) is not considered repair. The bodies of rigid plastic IBCs and the inner receptacles of composite IBCs are not repairable.

(c) *Routine maintenance of IBCs* is the routine performance on metal, rigid plastic or composite IBCs of operations such as:

- (1) Cleaning;
- (2) Removal and reinstallation or replacement of body closures (including associated gaskets), or of service equipment conforming to the original manufacturer's specifications provided that the leaktightness of the IBC is verified; or
- (3) Restoration of structural equipment not directly performing a hazardous material containment or discharge pressure retention function so as to conform to the design type (for example, the straightening of legs or lifting attachments), provided the containment function of the IBC is not affected.

[68 FR 45042, July 31, 2003]

§ 180.351 Qualification of IBCs.

(a) *General.* Each IBC used for the transportation of hazardous materials must be an authorized packaging.

(b) *IBC specifications.* To qualify as an authorized packaging, each IBC must conform to this subpart, the applicable requirements specified in part 173 of this subchapter, and the applicable re-

quirements of subparts N and O of part 178 of this subchapter.

[Amdt. 180-5, 59 FR 38079, July 26, 1994, as amended at 66 FR 45391, Aug. 28, 2001]

§ 180.352 Requirements for retest and inspection of IBCs.

(a) *General.* Each IBC constructed in accordance with a UN standard for which a test or inspection specified in paragraphs (b)(1), (b)(2) and (b)(3) of this section is required may not be filled and offered for transportation or transported until the test or inspection has been successfully completed. This paragraph does not apply to any IBC filled prior to the test or inspection due date. The requirements in this section do not apply to DOT 56 and 57 portable tanks.

(b) *Test and inspections for metal, rigid plastic, and composite IBCs.* Each IBC is subject to the following test and inspections:

(1) Each IBC intended to contain solids that are loaded or discharged under pressure or intended to contain liquids must be tested in accordance with the leakproofness test prescribed in §178.813 of this subchapter every 2.5 years, starting from the date of manufacture or the date of a repair conforming to paragraph (d)(1) of this section.

(2) An external visual inspection must be conducted initially after production and every 2.5 years starting from the date of manufacture or the date of a repair conforming to paragraph (d)(1) of this section to ensure that:

(i) The IBC is marked in accordance with requirements in §178.703 of this subchapter. Missing or damaged markings, or markings difficult to read must be restored or returned to original condition.

(ii) Service equipment is fully functional and free from damage which may cause failure. Missing, broken, or damaged parts must be repaired or replaced.

(iii) The IBC is capable of withstanding the applicable design qualification tests. The IBC must be externally inspected for cracks, warpage, corrosion or any other damage which