DEPARTMENT OF TRANSPORTATION
HAZARDOUS MATERIALS REGULATIONS BOARD
WASHINGTON, D.C. 20590

[49 CFR Parts 173, 178]

[Docket No. HM-23; Notice No. 69-11]

NEW SPECIFICATION 8BW CYLINDER FOR ACETYLENE

Notice of Proposed Rule Making

The Hazardous Materials Regulations Board is considering amending § 173.303 of the Hazardous Materials Regulations (49 CFR 170-189) to authorize the shipment of acetylene in a proposed new specification 8BW cylinder. It is also proposed to add § 178.62 to set forth the requirements for the new specification cylinder which would be constructed in accordance with requirements for specification 4BW cylinders (§ 178.61) and filled with a porous filling as required for specification 8AL cylinders (§ 178.60-20).

Interested persons are invited to give their views on this proposal. Communications should identify the docket number and be submitted in duplicate to the Secretary, Hazardous Materials Regulations Board, Department of Transportation, 400 Sixth Street SW., Washington, D.C. 20590. Communications received on or before May 29, 1969, will be considered before final action is taken on the proposal. All comments received will be available for examination by interested persons at the Office of the Secretary, Hazardous Materials Regulations Board, both before and after the closing date for comments.

Adoption of this proposal will provide for the use of so-called three-piece cylinders which have longitudinal seams that are electric-arc welded. One cylinder presently authorized for acetylene, specification 8 (§ 178.59), permits a longitudinal seam only if forge lapwelded.

One manufacturer has reported that its experience in the manufacture and testing of specification 4BW cylinders has indicated no failures in those tested at 4 times service pressure, that normal pressure ruptures occurred at approximately 5 to 6 times service pressure, such failures never occurring in the electric-arc welded longitudinal seams.

This proposal appears to be justified since (1) electric-arc welded longitudinal seams are generally more reliable than those which are forge lap welded, (2) the required hydrostatic test pressure for each cylinder produced is two times the marked service pressure (minimum test pressure, 500 pounds per square inch), the same as for acetylene cylinders presently authorized, (3) the random hydrostatic test on one cylinder out of each lot of 500 cylinders or less is 4 times service pressure (minimum test pressure, 1000 pounds per square inch) as compared with a minimum test pressure of 750 pounds per square inch (minimum, 3 times service pressure) out of each lot of 200 cylinders or less for acetylene cylinders presently authorized and (4) the joint efficiency for the proposed specification cylinder is related to a radiographic inspection criteria.

In consideration of the foregoing, it is proposed to amend § 173.303 to authorize specification 8BW cylinders for acetylene. In addition, it is proposed to add § 178.62 in Part 178 to read as follows:

§ 178.62 Specification 8BW; welded steel cylinder with porous filling for acetylene.

§ 178.62-1 Compliance.

(a) Each cylinder must meet the requirements of this section and the pertinent requirements of § 173.24 of this chapter.

§ 178.62-2 Construction, inspection, and testing.

(a) Cylinders must be constructed, inspected, and tested in accordance with the requirements for specification 4BW cylinders as specified in § 178.61.

(b) Minimum service pressure may not be less than 250 pounds per square inch.

§ 178.62-3 Porous filling.

(a) Each cylinder must be filled with porous material and solvent within the limitations and in the manner specified in § 178.60-20.

§ 178.62-4 Marking.

(a) Marking must be as specified in § 178.61-20 except that 8 must be substituted for 4 to make the specification identification DOT-8BW. In addition, the tare weight of the cylinder with porous material, solvent, and valve, but without removable cap must be stamped near the other required markings in pounds and ounces.

§ 178.62-5 Inspector's reports.

(a) Inspector's reports must be prepared and certified as specified in §§ 178.60-24(b) and 178.61-21 with the specification identification entered as DOT-8BW. Such reports must be forwarded in accordance with § 178.61-4(d).

This proposal is made under the authority of sections 831-835 of title 18 United States Code, section 9 of the Department of Transportation Act (49 U.S.C. 1657), and title VI and section 902(h) of the Federal Aviation Act of 1958 (49 U.S.C. 1421-1430 and 1472(h)).

Issued in Washington, D.C., on April 16, 1969.

C. P. MURPHY,
Rear Admiral, U.S. Coast Guard, by direction of Commandant, U.S. Coast Guard.

JOHN R. JAMIESON,
Deputy Administrator, Federal Highway Administration.

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SAM SCHNEIDER,
Board Member for the Federal Aviation Administration.

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