



U.S. Department of Transportation
**Pipeline and Hazardous Materials
Safety Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

Mr. Darrell K. Garton
CTC Certified Training Company
4082 Pioneer Road
Montrose, CO 81403

APR 23 2015

Reference No. 15-0011

Dear Mr. Garton:

This is in response to your January 15, 2015 letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the maintenance and requalification of hermetically sealed fire extinguishers manufactured to meet the requirements of a Department of Transportation (DOT) 4DS specification cylinder and several Special Permits issued by the Pipeline and Hazardous Materials Safety Administration (PHMSA) (e.g., DOT-SP 7026, 7945, 8439, 8495, 10867). We have paraphrased your questions and answered them in the order you provided.

- Q1. In the August 25, 2014 e-mail response, PHMSA's Field Services Support Division stated that the "K" approval of DOT 4DS cylinder requalifiers prescribed in §§ 107.805 and 180.211 is required if a rupture disc in a pressure relief device (PRD) is replaced on a cylinder rebuild without heat treatment. You ask if the person rebuilding the cylinder is required to have a "K" approval before he or she can replace a rupture disc on the hermetically sealed DOT 4DS fire extinguishers you described?
- A1. The answer is no. In the scenario you described, the PRD is removed from the DOT 4DS to perform a cylinder requalification. If the cylinder passes the requalification, a new PRD is placed on the cylinder by welding it to the "boss." Because the boss is fusion welded to the cylinder and the PRD is welded to the boss, the PRD does not come in direct contact with a pressure part of the cylinder and, therefore, its installation is not a "rebuild" or "repair" as these terms are defined under § 180.203 of the HMR. Persons who replace a rupture disc in a PRD on a DOT 4DS cylinder must be properly trained to perform this task in conformance with 49 CFR Part 172, Subpart H (Training).
- Q2. If the procedure to replace the rupture disc on a DOT 4DS cylinder does fall under the rebuilding requirements specified in § 180.211 and a "K" approval is required, please clarify how the approval holder will not be in violation of the HMR when

performing this action since it is impossible to comply simultaneously with the requirements prescribed in §§ 180.211(d)(2)(ii) (visual inspection after removal of a non-pressure component) and 180.211(d)(2)(iv) (welding and inspecting a rebuilt cylinder).

- A2. As stated earlier, the procedure to replace a PRD that contains a rupture disc on a DOT 4DS cylinder is neither a “rebuild” or “repair” under the HMR criteria, and is not subject to the “K” approval requirements. As a result, the requalifier is required to perform only the visual inspection prescribed in § 180.211(d)(2)(ii).

Thank you for bringing this matter to our attention. We may consider clarifying this requirement in a future rulemaking.

I hope this satisfies your request.

Sincerely,

A handwritten signature in cursive script that reads "T. Glenn Foster". The signature is written in black ink and is positioned above the typed name.

T. Glenn Foster
Chief, Regulatory Review and Reinvention Branch
Standards and Rulemaking Division



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Edmondson
§180.211
DOT-4 Series Specification
Cylinders
15-0011

January 15, 2015

Charles Betts, Director
Standards and Rulemaking
Office of Hazardous Materials
U. S. Department of Transportation- PHMSA
1200 New Jersey Ave, S. E.
Washington, D. C., 20590-0081

Dear Mr. Betts,

This letter is to request a formal interpretation of 49 CFR 180.211, as it pertains to maintenance and requalification of hermetically sealed fire extinguishers manufactured under DOT-4DS specification and related Special Permits (such as, but not limited to: SP's 7026, 7945, 8439, 8495, 10867). I would also request a technical review of this issue prior to response.

It has recently been stated by PHH-40 that the maintenance ("overhaul") on these cylinders falls under the rebuild requirements of 180.211, and therefore requires a "K" authorization, because replacement of the rupture disc constitutes "welding on the cylinder". (See email below from Benjamin Smith).

While I am in favor of better control over the procedure, I do not believe this procedure falls under the rebuild requirements of section 180.211 for the following reasons:

1. The cylinder, itself, is not being altered.
2. There is no welding performed on the cylinder, itself. The welding is performed on the boss (an attachment to the cylinder, per 178.47(e)).
3. The boss is specified to be "weldable stainless steel". See 178.47(e) and (h)(2)
4. It would be impossible to perform the tasks required, and still be in compliance with 180.211.
 - a. 180.211(d)(2)(i) and (ii), respectively, require the cylinder to be heat treated, and subjected to volumetric expansion test. These cylinders are not heat treated after the procedure, and most importantly, the rupture disc is not capable of holding test pressure – this is why it is removed prior to performing requalification. Therefore, it would be impossible to be in compliance with 180.211(d)(2)(ii).
 - b. 180.211(d)(2)(iv) requires that the material used for the replacement part conforms to the specification, including tensile tests on the replacement part. This is not possible, since the replacement part is a rupture disc, and therefore does not meet the original wall stress requirement, and cannot possibly meet the tensile requirements of the cylinder.

(Please see attached photo for clarification of weld location.)

Q1: Is such "K" approval required for the replacement of the rupture disc on these cylinders?

Q2: If it is found that the procedure does fall under the rebuild requirements of 180.211, and "K" approval is required, please clarify how the approval holder will not be in violation of the HMR, since it is impossible to comply with the requirements of 180.211(d)(2)(ii) and 180.211(d)(2)(iv).

Thank you for your consideration of this matter.

Sincerely,

A handwritten signature in cursive script that reads "Darrell K. Garton". The signature is written in black ink and is positioned above the printed name and company information.

Darrell K. Garton
CTC Certified Training Co.

Darrell K. Garton

Subject: FW: Upcoming inspections

From: benjamin.smith@dot.gov [<mailto:benjamin.smith@dot.gov>]

Sent: Monday, August 25, 2014 11:10 AM

To: dq@ctcseminars.com; Duane.Cassidy@dot.gov

Cc: michael.donahue@dot.gov; jcassidy@arrowheadindustrial.com; cmartin@arrowheadindustrial.com

Subject: RE: Upcoming inspections

I have been accepting just the most recent CCM approved rupture disk procedure taken from the CCM, not the entire CMM. Again, just showing that the procedure is current. As to accepting a single procedure; I'm counting on the IIA to get the most current. I understand that there will be no heat treatment, and this is where it's a matter of having the approved "K" CA. If at the time of a fitness review my fitness recommendation fit and I have reviewed and considered the application packet as presented to me, then I'm accepting the procedure that is included in the CCM and if that is their procedure then it is accepted that that procedure is approved by virtue of the granted CA. I don't want to venture into the realm of special permits, rather I would like to work with in the HMR and cover the issuance of the CA as a rebuild of a series 4 cylinder. Again, I don't need a copy of the entire CCM, just the section that covers the steps in replacing the rupture disk. I more than willing to accept an excerpt with a the cover of the CCM attached to it. For me it comes down to the photos and the approved SOP for the task. I need to know it works and that the facility has trained their employees to the correct procedure. You can check with Chris to see what I has been submitted for PSC so far.

This task/action is a rebuild.

VR, Ben

Welding performed
on boss, not on
cylinder.

