



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

July 16, 2024

Sam Browning
Moog, Inc.
Ashchurch Parkway
Tewkesbury
Gloucestershire
GL20 8TU
United Kingdom

Reference No. 24-0033

Dear Mr. Browning:

This letter is in response to your April 2, 2024, email and subsequent emails requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to cylinder condemnation. Specifically, you seek confirmation that when a cylinder is to be condemned in accordance with the criterion of § 180.205(j)(1)(x), the visual inspection and reporting and record retention requirements found in §§ 180.205(f) and 180.215(b)(2)—respectively—are not applicable.

Your understanding is correct that a requalifier is not required to perform a visual inspection nor comply with the recordkeeping requirements found in §§ 180.205(f) and 180.215(b)(2), respectively. These provisions apply to specification cylinders requalified for hazardous materials service and do not apply to cylinders that are condemned such as a cylinder past its specified service life. Moreover, upon determination that a cylinder must be condemned, a requalifier need only adhere to the requirements found in § 180.205(j)(2) when a cylinder is condemned.

I hope this information is helpful. Please contact us if we can be of further assistance.

Sincerely,

A handwritten signature in blue ink, appearing to read "Dirk Der Kinderen".

Dirk Der Kinderen
Chief, Standards Development Branch
Standards and Rulemaking Division

Baker

24-0033

From: [Approvals \(PHMSA\)](#)
To: [Hazmat Interps](#)
Subject: FW: CFR49/subtitle-B/chapter-I/subchapter-C/part-180 Cylinder Condemnation Query
Date: Tuesday, May 28, 2024 8:20:57 AM
Attachments: [image001.png](#)
[image003.png](#)

Duane M. Cassidy

Chief, Pressure Vessels Branch (PHH-25)
Sciences and Engineering Division
Office of Hazardous Materials Safety

US Department of Transportation
Pipeline and Hazardous Materials Safety Administration
E21-301, 1200 New Jersey Ave SE, Washington, DC 20590
Office/Mobile: 202.596.0583

[PHMSA Home](#) | [LinkedIn](#) | [Twitter](#) | [HAZMAT](#) | [OPS](#)



Know what's below.
Call before you dig.



From: Browning, Sam <sbrowning@moog.com>
Sent: Tuesday, May 28, 2024 8:00 AM
To: Approvals (PHMSA) <Approvals@dot.gov>
Subject: RE: CFR49/subtitle-B/chapter-I/subchapter-C/part-180 Cylinder Condemnation Query

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Dear whom it may concern,

Please could you comment on the below?

Sam Browning | Product Engineer

Mobile +44 7475 140 111
e-mail sbrowning@moog.com

MOOG

Ashchurch, Tewkesbury
Gloucestershire, United Kingdom
www.moog.com

From: Browning, Sam
Sent: Wednesday, May 8, 2024 9:29 AM
To: Approvals (PHMSA) <Approvals@dot.gov>
Subject: RE: CFR49/subtitle-B/chapter-I/subchapter-C/part-180 Cylinder Condemnation Query

Hi There,

I submitted an email to pipeline_interp_submittal@dot.gov regarding the below.

I didn't receive a conformation email so am concerned about waiting the 120 days to then find out this email hasn't been reviewed. Can you advise

Kind regards

Sam Browning | Product Engineer

Mobile +44 7475 140 111
e-mail sbrowning@moog.com

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Ashchurch, Tewkesbury
Gloucestershire, United Kingdom
www.moog.com

From: Approvals (PHMSA) <Approvals@dot.gov>
Sent: Tuesday, April 2, 2024 3:09 PM
To: Browning, Sam <sbrowning@moog.com>
Subject: [EXTERNAL] RE: CFR49/subtitle-B/chapter-I/subchapter-C/part-180 Cylinder Condemnation Query

The information for submitting/searching for interpretations is located on our PHMSA webpage [HERE](#).

Duane M. Cassidy
Chief, Pressure Vessels Branch (PHH-25)
Sciences and Engineering Division
Office of Hazardous Materials Safety

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Pipeline and Hazardous Materials Safety Administration
E21-301, 1200 New Jersey Ave SE, Washington, DC 20590
Office/Mobile: 202.596.0583

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From: Browning, Sam <sbrowning@moog.com>
Sent: Tuesday, April 2, 2024 10:01 AM
To: Approvals (PHMSA) <Approvals@dot.gov>
Subject: RE: CFR49/subtitle-B/chapter-I/subchapter-C/part-180 Cylinder Condemnation Query

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not click on links or open attachments unless you recognize the sender and know the content is safe.

Hi there,

Thanks for your prompt response. How would I go about submitting this request to the Standards and Rulemaking Division?

Many thanks

Sam Browning | Product Engineer

Mobile +44 7475 140 111
e-mail sbrowning@moog.com

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From: Approvals (PHMSA) <Approvals@dot.gov>

Sent: Tuesday, April 2, 2024 2:54 PM

To: Browning, Sam <sbrowning@moog.com>; Approvals (PHMSA) <Approvals@dot.gov>

Subject: [EXTERNAL] RE: CFR49/subtitle-B/chapter-I/subchapter-C/part-180 Cylinder Condemnation Query

The cylinder must be condemned and taken out of service in accordance with the Hazardous Materials Regulations, as you clearly laid out. This is my interpretation of the regulations, however, if you want an official position from U.S. DOT, you would have to submit a request for interpretation from our Standards and Rulemaking Division.

Duane M. Cassidy

Chief, Pressure Vessels Branch (PHH-25)
Sciences and Engineering Division
Office of Hazardous Materials Safety

US Department of Transportation
Pipeline and Hazardous Materials Safety Administration
E21-301, 1200 New Jersey Ave SE, Washington, DC 20590
Office/Mobile: 202.596.0583

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From: Browning, Sam <sbrowning@moog.com>

Sent: Tuesday, April 2, 2024 9:26 AM

To: Approvals (PHMSA) <Approvals@dot.gov>

Subject: CFR49/subtitle-B/chapter-I/subchapter-C/part-180 Cylinder Condemnation Query

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Dear whom it may concern,

I write to you from Moog Aircraft Control components in Tewkesbury, United Kingdom.

We have the capability of hydrostatic testing a selection of cylinders for requalification.

I Write to you regarding a query around the condemnation of cylinders due to service life expiry.

**Can you confirm,
when a cylinder is to be condemned due to meeting the criteria in section 49
CFR 180.205(i)(1)(x) “For a cylinder with a specified service life, its
authorized service life has expired.”**

Cylinder condemnation.

49 CFR 180.205(i)

(1) A cylinder must be condemned when—

(i) The cylinder meets a condition for condemnation under the visual inspection requirements of [paragraph \(f\)](#) of this section.

(ii) The cylinder leaks through its wall.

(iii) Evidence of cracking exists to the extent that the cylinder is likely to be weakened appreciably.

(iv) For a DOT specification cylinder, other than a DOT 4E aluminum cylinder or a special permit cylinder, permanent expansion exceeds 10 percent of total expansion.

(v) For a DOT 3HT cylinder—

(A) The pressure test yields an elastic expansion exceeding the marked rejection elastic expansion (REE) value.

(B) The cylinder shows evidence of denting or bulging.

(C) The cylinder bears a manufacture or an original test date older than

twenty-four years or after 4380 pressurizations, whichever occurs first. If a cylinder is refilled, on average, more than once every other day, an accurate record of the number of rechargings must be maintained by the cylinder owner or the owner's agent.

(vi) For a DOT 4E aluminum cylinder, permanent expansion exceeds 12 percent of total expansion.

(vii) For a DOT special permit cylinder, permanent expansion exceeds the limit in the applicable special permit, or the cylinder meets another criterion for condemnation in the applicable special permit.

(viii) For an aluminum or an aluminum-lined composite special permit cylinder, the cylinder is known to have been or shows evidence of having been overheated. Arc burns must be considered evidence of overheating.

(ix) The cylinder is known to have been or shows evidence of having been over-pressurized.

(x) For a cylinder with a specified service life, its authorized service life has expired.

(xi) The cylinder has been stamped on the sidewall, except as provided in [part 178 of this subchapter](#).

This means it does NOT need to be visually inspected as per 49 CFR

180.205(f)

Visual inspection. Except as otherwise provided in this subpart, each time a cylinder is pressure tested, it must be given an internal and external visual inspection.

(1) The visual inspection must be performed in accordance with the following CGA Pamphlets: C-6 for steel and nickel cylinders (IBR, see [§ 171.7 of this subchapter](#)); C-6.1 for seamless aluminum cylinders (IBR, see [§ 171.7 of this subchapter](#)); C-6.2 for fiber reinforced composite special permit cylinders (IBR, see [§ 171.7 of this subchapter](#)); C-6.3 for low pressure aluminum cylinders (IBR, see [§ 171.7 of this subchapter](#)); C-8 for DOT 3HT cylinders (IBR, see [§ 171.7 of this subchapter](#)); and C-13 for DOT 8 series cylinders (IBR, see [§ 171.7 of this subchapter](#)).

(2) For each cylinder with a coating or attachments that would inhibit inspection of the cylinder, the coating or attachments must be removed before performing the visual inspection.

(3) Each cylinder subject to visual inspection must be approved, rejected, or condemned according to the criteria in the applicable CGA pamphlet.

(4) In addition to other requirements prescribed in this [paragraph \(f\)](#), each specification cylinder manufactured of aluminum alloy 6351-T6 and used in self-contained underwater breathing apparatus (SCUBA), self-contained breathing apparatus (SCBA), or oxygen service must be inspected for sustained load cracking in accordance with [Appendix C of this part](#) at the first scheduled 5-year requalification period after January 1, 2007, and every five years thereafter.

(5) Except in association with an authorized repair, removal of wall thickness via

grinding, sanding or other means is not permitted. Removal of paint or loose material to prepare the cylinder for inspection is permitted (e.g., shot blasting).
(6) Chasing of cylinder threads to clean them is permitted, but removal of metal must not occur. Re-tapping of cylinder threads is not permitted, except by the original manufacturer, as provided in [§ 180.212](#).

Thus, meaning it does NOT need a “Pressure test and visual inspection record “49 CFR 180.215(b)(2)” to be completed as a visual inspection or pressure Test isn’t being undertaken.

From my interpretation if we have a cylinder that is known to be out of service life then we are required to complete section “49 CFR 180.205(i)(2)” ONLY.

When a cylinder must be condemned, the requalifier must—

- (i) Communicate condemnation of the cylinder as follows:
 - (A) Stamp a series of Xs over the DOT-specification number and the marked pressure or stamp “CONDEMNED” on the shoulder, top head, or neck using a steel stamp;
 - (B) For composite cylinders, securely affix to the cylinder a label with the word “CONDEMNED” overcoated with epoxy near, but not obscuring, the original cylinder manufacturer's label; or
 - (C) As an alternative to the stamping or labeling as described in this [paragraph \(i\)\(2\)](#), at the direction of the owner, the requalifier may render the cylinder incapable of holding pressure; and
- (ii) Notify the cylinder owner, in writing, that the cylinder is condemned and may not be filled with hazardous material and offered for transportation in commerce where use of a specification packaging is required.
- (3) No person may remove, obliterate, or alter the required condemnation communication of [paragraph \(i\)\(2\)](#) of this section.

I look forward to hearing from you.

Kind regards

Sam Browning | Product Engineer

Mobile +44 7475 140 111
e-mail sbrowning@moog.com

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