



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, D.C. 20590

MAY 23 2016

Mr. Alex McGonagle
UBH International
Orrell Lane
Burscough
L40 0SL
United Kingdom

Ref. No. 15-0155

Dear Mr. McGonagle:

This is in response to your July 22, 2015 e-mail, and follow discussion with a member of my staff, in which you requested written clarification of the Hazardous Materials Regulations (HMR; 49 CFR parts 171-180) concerning transport provisions for portable tanks. You ask for clarification of the requirements in §§ 178.275(f)(1) and 178.275(g)(1) as they relate to vacuum-relief devices and pressure relief devices. Specifically, you ask if a portable tank is not fitted with a vacuum-relief device, does the requirement to prevent rupture of the shell due to a vacuum provided in § 178.275(g)(1) apply.

For the purposes of functions covered by the HMR (i.e., transportation functions), the answer to your question is yes. When the portable tank capacity is not less than 1,900 liters (501.9 gallons) section 178.275(g)(1) defines the functions of a pressure relief device. Included is the requirement that pressure relief devices must have sufficient capacity to prevent rupture of the shell due to over pressurization or vacuum resulting from filling, discharging, heating of the contents, or fire. Whether or not the portable tank has a vacuum relief valve, the portable tank design must protect against rupture due to vacuum per § 178.275(f)(1) of not less than 0.4 bar (40.0 kPa).

I trust this information is helpful. Please do not hesitate to contact us if you have any questions.

Sincerely,

Duane Pfund
International Standards Coordinator
Standards and Rulemaking Division

Webb
§ 178.275
Specification for UN
Portable tanks
15-0155

Dodd, Alice (PHMSA)

From: Geller, Shelby CTR (PHMSA)
Sent: Tuesday, July 28, 2015 12:32 PM
To: Hazmat Interps
Subject: FW: Interpretation of 49 CFR 178.275

Dear Shante and Alice,

See below for the request for a formal letter of interpretation. Mr. McGonagle spoke with Neil Suchak.

His mailing address is:
UBH International
Orrell Lane
Burscough
Lancashire
L40 0SL

Thanks,
Shelby

From: Alex McGonagle [<mailto:amcgonagle@ubh.co.uk>]
Sent: Tuesday, July 28, 2015 9:33 AM
To: Geller, Shelby CTR (PHMSA)
Subject: RE: Interpretation of 49 CFR 178.275

Dear Shelby

Thank you for your reply. I spoke to your colleague, Neil, who provided me with useful verbal advice. However, in the circumstances, we do need a written interpretation of this question, so please accept this e-mail as our formal request for a written interpretation.

Best Regards

Alex

From: shelby.geller.ctr@dot.gov [<mailto:shelby.geller.ctr@dot.gov>]
Sent: 22 July 2015 21:55
To: Alex McGonagle
Subject: RE: Interpretation of 49 CFR 178.275

Dear Alex McGonagle,

We have received your inquiry about the hazardous materials regulations (49 CFR Parts 171-180). The hazardous materials regulations are available at the following URL:

<http://phmsa.dot.gov/regulations>

A hazardous materials regulatory specialist would be happy to speak with you regarding your inquiry. You may contact the Hazardous Materials Information Center, which is staffed with regulatory specialists who can quickly answer your questions by phone, Monday through Friday, 9 AM - 5 PM EST at +1 (202) 366-4488.

Sincerely,

Shelby, Hazardous Materials Specialist

An e-mail response from this office is considered informal guidance. Formal guidance may be requested in accordance with 49 CFR 105.20. <http://phmsa.dot.gov/hazmat/regs/interps>

From: Alex McGonagle [<mailto:amcgonagle@ubh.co.uk>]
Sent: Wednesday, July 22, 2015 11:02 AM
To: INFOCNTR (PHMSA)
Subject: Interpretation of 49 CFR 178.275.

Dear Sir/Madam

We are looking for assistance on an interpretation of 49 CFR 178.275, with relation to pressure relief devices. Under paragraph (f) (1), it states "A shell that is not fitted with a vacuum-relief device must be designed to withstand, without permanent deformation, an external pressure of not less than 0.4 bar (40 kPa)." However, under section (g) (1), the last sentence states "The pressure relief devices must have sufficient capacity to prevent rupture of the shell due to over pressurization or vacuum resulting from filling, discharging, heating of the contents or fire".

We have always believed that this is intended to read that if a vacuum relief valve is fitted, it must fulfil the function defined under (g) (1), but we have a customer who is saying that the wording of (g) (1) means that the tank should be able to be discharged by pump without opening an airline and not implode under vacuum.

We would appreciate if you could confirm the US DOT's interpretations of these 2 sentences.

Best Regards

Alex

Alex McGonagle
UBH International
Direct: +44 (0) 1704 898508
Switchboard: +44 (0) 1704 898 500
Mobile: +44 (0) 7740 283739

Webb, Steven (PHMSA)

From: Alex McGonagle <amcgonagle@ubh.co.uk>
Sent: Thursday, October 01, 2015 12:19 PM
To: Webb, Steven (PHMSA)
Subject: RE: DOT Interp

Hi Steve

Sorry, I missed responding to your message. Our answers to your questions are as follows:

1. Our question relates to a tank with a pressure only relief valve, no vacuum relief valve.
2. Yes, this in essence sums up the question.
3. To give more background, most UN Portable tanks built worldwide are built designed to 0.4 bar vacuum and with no vacuum relief valve. An end user of a tank container who is used to using road tankers in the US fitted with vacuum relief valves steam cleaned the tank and locked off all valves and the manway. They say this is their standard procedure, believing that it helps keep the tank internals clean. Normally, the vacuum relief valve will activate, preventing the vacuum from imploding the tank (although this does let potentially contaminated air into the tank, negating the benefit of closing the tank). However, as this tank did not have a vacuum relief valve, the tank imploded. The customer is claiming that the tank does not meet clause 178.275 (g) (1).

Our claim is that 178.275 (g) (1) is to define the function of a relief valve if present. Therefore, if the tank has a vacuum relief valve, it must protect against rupture due to vacuum. However, if the tank does not have a relief valve, in line with 178.275 (f) (1), we would argue that there can be no expectation that any valve would provide protection against rupture due to vacuum.

We would like you to confirm if you agree with our statement above or not.

Sorry, I know this is not the easiest concept to put into words. Please let me know if you need any further clarification.

Best Regards

Alex

From: steven.webb@dot.gov [mailto:steven.webb@dot.gov]
Sent: 01 October 2015 16:46
To: Alex McGonagle
Subject: RE: DOT Interp

Alex,

I'm still awaiting clarification of the below questions to progress a response for your interpretation request. I am unable to answer the questions as posed in your original email request. Please provide additional clarification on your questions as requested below or I may have to close out this request.

Thanks in Advance

Steve Webb

Transportation Specialist- International Standards

Pipeline & Hazardous Materials Safety Administration (PHMSA) -U.S. DOT

Office of Hazardous Materials Safety

L40 OSL

If you are unable to post internationally, you could send it to our customer, their address is as follows:

Mike Smith
Exsif Worldwide
2700 Westchester Avenue
Suite 400
Purchase
NY 10577

Thank you for your assistance on this matter

Best Regards

Alex

From: steven.webb@dot.gov [mailto:steven.webb@dot.gov]
Sent: 21 August 2015 19:44
To: Alex McGonagle
Subject: DOT Interp

Mr. McGonagle,

I'm drafting the response to your request for interpretation on portable tanks and need a mailing address to send the response to. The response is still in the concurrence phase, but an address would help facilitate its delivery once completed. Please provide a valid mailing address.

Thanks

Steve Webb
Transportation Specialist- International Standards Pipeline & Hazardous Materials Safety Administration (PHMSA) -U.S.
DOT Office of Hazardous Materials Safety
1200 New Jersey Avenue S.E., E24-422, Washington D.C. 20590
E24-422
steven.webb@dot.gov
202-366-4579