U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

September 21, 2023

Jon Schultz
Director of Fleet Engineering
Union Tank Car Company
175 W. Jackson Blvd.
Suite 2100
Chicago, IL 60604

Reference No. 23-0054

Dear Mr. Schultz:

This letter is in response to your June 22, 2023, email requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) applicable to the requirements in Part 179 for tank car jackets and jacket flashing. In your email, you describe several methods that you believe could potentially be used to manufacture and repair flashed openings in tank car jackets:

1. Fillet weld of faying jacket sheets;
2. Intermittent fillet weld of faying jacket sheets (known as a skip weld) and sealant caulking;
3. Non-welded joint consisting of faying jacket sheets with fasteners and gasket or sealant caulk to form a shedding barrier to prevent ingress of weather past the jacket opening; or
4. Non-welded slip joint consisting of faying jacket sheets that overlap that allow for expansion and contraction of faying surfaces.

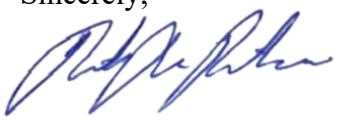
Specifically, you ask whether the methods identified here are appropriate to meet the requirements for tank car jackets in §§ 179.100-4(a) or 179.200-4(a).

The answer is that a tank car jacket is in compliance with §§ 179.100-4(a) or 179.200-4(a) if it is metal, not less than 11 gauge thick, and flashed around all openings so as to be weather-tight. Note that tank car jacket patches must have 100% welding around the jacket sheet edges and the jacket patch repair must be in compliance with the original tank car design approval. We further

emphasize that tank car jacket patches may not be secured without 100% welding around the jacket patch. For example, the skip weld and caulk method described in option #2 above would not be an acceptable method, unless otherwise authorized by a DOT Special Permit.

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

Sincerely,



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

Patrick

23-0054

**From:** Kelley, Shane (PHMSA)
**To:** Hazmat Interps
**Cc:** DerKinderen, Dirk (PHMSA); Patrick, Eamonn (PHMSA)
**Subject:** FW: Union Tank Car Company Letter of Interpretation Request
**Date:** Thursday, June 22, 2023 11:35:23 AM
**Attachments:** image001.png
Union Tank Car Company Jacket Flashing LOI Request.pdf

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Please process as an interp

Thank you

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**From:** Jonathan M Schultz <SchultzJ@utlx.com>
**Sent:** Thursday, June 22, 2023 11:33 AM
**To:** Kelley, Shane (PHMSA) <shane.kelley@dot.gov>
**Subject:** Union Tank Car Company Letter of Interpretation Request



Mr. Kelley,

Union Tank Car is seeking a letter of interpretation regarding 49 C.F.R. §179.100-4(a) and 49 C.F.R. §179.200-4(a). Please see our formal request attached here.

Sincerely,

**Jon Schultz** | Director of Fleet Engineering
**Union Tank Car Company** | A Marmon/Berkshire Hathaway Company
175 W. Jackson Blvd. | Suite 2100 | Chicago, IL 60604
P: 312-431-2708 | schultzj@utlx.com| www.utlx.com

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June 22, 2023

Mr. Shane Kelley
Director, Standards and Rulemaking Division
U.S. DOT/PHMSA
1200 New Jersey Avenue, SE East Building, 2nd Floor
Washington, DC 20590

Dear Mr. Kelley,

I am writing to request a letter of interpretation regarding 49 C.F.R. §179.100-4(a) and 49 C.F.R. §179.200-4(a), specific to the following requirement:

"*The entire insulation must be covered with a metal jacket of a thickness not less than 11 gauge (0.1196 inch) nominal (Manufacturer's Standard Gauge) and flashed around all openings so as to be weather tight.*"

These sections are prescriptive that the jacket material must be at least 11-gauge metal but non-prescriptive as to the method of ensuring the openings are flashed as weather tight. 49 C.F.R. §171.8 does not provide definitions for the language of weather tight and flashed. Based on the webster dictionary, flashing[1] is sheet metal used in waterproofing (as at roof valleys or hips or the angle between a chimney and a roof). Weathertight[2] is descriptive as proof against wind and rain.

Typical manufacturing and repair methods of flashed openings of tank jackets include methods of:

- Fillet weld of faying jacket sheets
- Intermittent fillet weld of faying jacket sheets (skip weld) and sealant caulking
- Non-welded joint consisting of faying jacket sheets with fasteners and gasket or sealant caulk to form a shedding barrier to prevent ingress of weather past the jacket opening.
- Non-welded slip joint consisting of faying jacket sheets that overlap that allow for expansion and contraction of faying surfaces.

[1] "Flashing." Merriam-Webster.com Dictionary, Merriam-Webster, https://www.merriam-webster.com/dictionary/flashing. Accessed 15 Jun. 2023.

[2] "Weathertight." Merriam-Webster.com Dictionary, Merriam-Webster, https://www.merriam-webster.com/dictionary/weathertight. Accessed 15 Jun. 2023.

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Do the methods described above satisfy the requirements of 49 C.F.R. §179.100-4(a) and 49 C.F.R. §179.200-4(a) for flashing the jacket openings to a weather tight condition?

Sincerely,

Jon Schultz
Director of Fleet Engineering