

Why should you feel safe when this truck hauling flammable liquids catches fire?



Why would anyone feel safe in this situation when the brakes caught fire on this commercial vehicle hauling flammable liquids?

It depends on whether the vessel is certified.

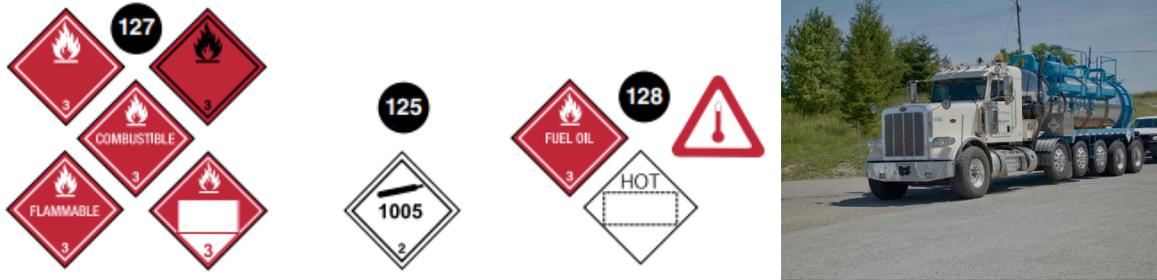
If the tank vessel is certified, then it was constructed in accordance with DOT regulations to withstand internal pressures to deal with heat and properly relieve during an emergency event like this.

In the case of this incident, once the overheated brakes were extinguished, no other issues occurred with the vessel itself. No leaks or explosions.

Why is a coded vessel necessary?

If the contents of what is being hauled is hazardous then a coded vessel is required.

The U.S. Department of Transportation (DOT) Federal Motor Carrier Safety Administration (FMCSA) lists what makes a material hazardous that include Explosive, Flammable, Oxidizer, Toxic, Radioactive & Corrosive.



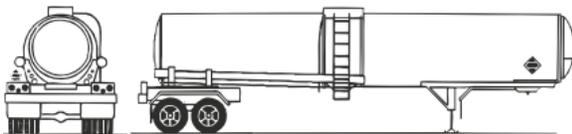
This is driven by DOT FMCSA. Pun intended. DOT 406/407 (formerly designated MC307 and MC312) and 412 for vacuum trucks list the requirements for coded vessels.

What does certified or coded mean?

Constructed and certified in conformance with the ASME Code means the cargo tank is constructed and stamped in accordance with the ASME Code and is annually inspected and certified by an Authorized Inspector.

Coded vessels are required to undergo annual testing for pressure, external and internal NDT thickness testing. Leakage testing is required every six months and each vessel should be marked with the most recent inspection dates.

DOT407, TC407, SCT307, MC307, TC307



- For toxic, corrosive, and flammable liquids
- Circular cross-section
- May have external ring stiffeners
- MAWP of at least 25 psi**

Specification DOT 412 for cargo tanks designed to be loaded by vacuum must have a minimum external MAWP of 15 psig in accordance with DOT FMCSA regulations in §178.348-1(c). A cargo tank built to a dual specification DOT 407/412, designed to be loaded by vacuum, must conform to both applicable specifications.

A manufacturer of a cargo tank must hold a current ASME certificate of authorization and must be registered with the DOT. All construction must be certified by an Authorized Inspector or by a Registered Inspector as applicable to the cargo tank.

American Petroleum Institute's (API) recommended practice 2219 was published to assist vacuum truck owners and operators in the development and implementation of practical and safe operating practices that will help identify hazards and reduce risks.

API 2219 requires vacuum cargo tanks used for highway transportation of liquid hydrocarbons and hazardous products and waste should be constructed of stainless or carbon steel in accordance with DOT 407 and DOT 412 requirements.

Vacuum trucks used in petroleum service should have shells or interior linings that are compatible with the materials to be conveyed.

Spirit's specialized fleet of tankers and trucks are DOT coded and can transport both hazardous and non-hazardous materials. Our barrel tankers utilize gear pumps and have 3-compartment tanks capable of hauling multiple products separately in one transport.

Spirit Energy Services: Providing environmental solutions for critical energy infrastructure



NEXT ISSUES:

OTHER PARTS OF THE SYSTEM FOR TRANSPORTING FLAMMABLE LIQUIDS (PUMPS, HOSES, GROUNDING AND BONDING)

TANK FACILITY SAFETY CONTROLS

VAPOR RECOVERY SYSTEMS