

Welded Repairs on Nurse Tanks



Catastrophic results can occur when unauthorized repairs are performed on high pressure vessels transporting anhydrous ammonia (NH₃). An improper weld on a nurse tank was a factor in a nurse tank failure that occurred on April 15, 2003 near Calamus, IA. resulting in one fatality and one serious injury. This is a stark reminder of the serious consequences that can occur as a result of a nurse tank failure.

A nurse tank meets the definition of a cargo tank. Nurse tanks used in agricultural operations for the transportation of anhydrous ammonia must be repaired by a facility that maintains an "R" stamp issued by the National Board of Boiler and Pressure Vessel Inspectors (National Board). This "R" stamp authorizes the facility to perform welded repairs on cargo tanks built to the American Society of Mechanical Engineers (ASME) code. **"Repair"** means any welding on a cargo tank wall done to return a cargo tank or a cargo tank motor vehicle to its original design and construction specification, or to a condition prescribed for a later equivalent specification in effect at the time of the repair. Only facilities that have been issued an "R" stamp by the National Board are authorized to perform repairs to nurse tanks.

Section 173.315(m) of Title 49 Code of Federal Regulations (CFR) states that a nurse tank must meet the requirements of the edition of the ASME Code in effect at the time the cargo tank was manufactured and is marked with a "U" stamp. The ASME Code establishes design and construction requirements for cargo tanks. In order to maintain the "U" stamp marking on the nurse tank, repairs that require welding must be performed in accordance with the National Board. The National Board requires welding on cargo tanks to be performed by facilities holding an "R" stamp. If you have questions please call Suzanne Rach, Hazardous Materials Division, Washington, DC at 202-385-2307.

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