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| *Top Cargo Tank Manufacturing Violations*  |
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| Top Cargo Tank Manufacturing Violations  |
| **PART NO** | **SECTION** | **DESCRIPTION** |
| 172 | 704(a) | Training requirements: General awareness/familiarization, Function-specific, Safety and or Security awareness training; No HM employee training as required |
| 172 | 704(d) | Recordkeeping: Insufficient training records or no training records |
| 171 | 8 | Design Certifying Engineer: Unqualified Design Certifying Engineers |
| 171 | 8 | Registered Inspector: Unqualified Registered Inspectors |
| 178 | 345-8 (c)(1) | Accident damage protection: Failing to meet applicable specifications, such as the overturn protection not meeting the required strength |
| 178 | 345-8 (b) (1) | Accident damage protection: Rear-end protection not rated at 155,000 lbs. when the piping is located in the lower 1/3 circumference of the tank |
| 178 | 345-8 (c) | Accident damage protection: Items extending outside of the overturn protection |
| 178 | 345-8 (d)(2)(ii) | Accident damage protection: Tanks with split rear end protection not having the required sacrificial device outboard of a shut-off valve |
| 178 | 345-8 (a)(3) | Accident damage protection: Improper methods of attachment of the accident damage protection devices |
| 178 | 345-8 (d)(1) | Accident damage protection: The rear-end cargo tank protection device must was not designed to deflect at least 6 inches horizontally forward with no contact between any part of the cargo tank motor vehicle which contains lading during transit and with any part of the rear-end protection device, or with a vertical plane passing through the outboard surface of the protection device. |
| 178 | 345-3(f)(3), 337-3(f)(3) and 3338-3(f)(3)  | Not using mounting pads when welding appurtenances to the wall of the cargo tank and or not extending at least 2 inches in each direction from any point of the appurtenance or attachment |
| 178 | 337-3(a)(l), 345-3(a)(l) and 338-3(a)(l): | Structural integrity, general requirements and acceptance criteria: Not manufacturing to a design margin of 4:1 as required. The maximum calculated design stress at any point in the cargo tank wall may not exceed the maximum allowable stress value prescribed in Section VIII of the ASME Code (IBR, see §171.7 of this subchapter), or 25 percent of the tensile strength of the material used at design conditions. |
| 178 | 15 (b)(1) and (c)(1) | Certification: Not designed or signed by a Design Certifying Engineer (DCE) |
| 178 | 345-1 | General requirements: 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 inspected and certified by an Authorized Inspector. |
| 178 | 345-4 | Joints: Welds not in conformance with Section VIII of the ASME Code: Insufficient weld material, Welding on contaminated (dirt, rust, etc.) material |
| 178 | 345-10 | Pressure Relief and Venting: Insufficient venting per surface area |
| 178 | 337-9(b)(6) | Piping, Valves, Hose, and Fittings: Cargo tank manufacturers and fabricators failed to demonstrate that all piping, valves, and fittings on a cargo tank are free from leaks |
| 178 | 345-5 | Manhole Assemblies: Not meeting labeling and or certification requirements |
| 178 | 346-5 | Pressure and leakage tests: Incorrectly performing hydrostatic or pneumatic test |
| 178 | 337-4(b) and 338-4 | Joints: Welding procedure and or welder performance not in accordance with Section IX of the ASME Code. Essential variables not in accordance: Number of passes; thickness of plate; heat input per pass; and manufacturer's identification of rod and or flux. |
| 178 | 338-16  | Inspection and testing: The welder and or the welding procedure are not qualified or followed in accordance with Section IX of the ASME |
| 178 | 320(b) | General requirements applicable to all DOT specification cargo tank motor vehicles |
| 178 | 345-14 | Marking: (b) name plate and (c) specification plate – incorrect or missing required information |
| 178 | 345-7(c) | Circumferential reinforcements: When a baffle or baffle attachment ring is used as a circumferential reinforcement member, it must produce structural integrity at least equal to that prescribed in § 178.345-3 and must be circumferentially welded to the cargo tank shell. The welded portion may not be less than 50 percent of the total circumference of the cargo tank and the length of any unwelded space on the joint may not exceed 40 times the shell thickness unless reinforced external to the cargo tank |
| 178 | 345-7 (d) | Circumferential reinforcements: ring stiffener used as a circumferential reinforcement member, whether internal or external, reinforcement must be continuous around the circumference of the cargo tank shell |