



Product Specifications

Corrugated Galvanized Steel Tanks for Potable Water Use

Section _____

Part I: General

1.01 Quality Assurance

- A. Acceptable Manufacturers/Suppliers: BH Tank, American Tank, Accu-Tank
- B. Manufacturing Standards:
 - 1. Manufacturer shall be able to provide documentation that the tank shell has been built to the applicable requirements of Uniform Building Code, and applicable sections of American Water Works Association Standards
 - 2. Tank manufacturer shall be in the business of manufacturing tanks to Underwriters Laboratories and AWWA standards.
- C. Materials:
 - 1. Steel: G-90 prime mill galvanized steel per ASTM A527 or ASTM A446 with 2.66" Pitch X .66" Depth nominal corrugations
 - 2. Rivets: Solid Steel Tinners Rivets per ASTM A525 or A446
 - 3. Bolts: ASTM A307 galvanized per ASTM A384 or A385
 - 4. Sealant: Sika-Flex 201 or 221 NSF Approved Urethane Polymer
 - 5. Coatings: Per manufacturer's specifications
- D. Warranty:
 - 1. Manufacturer shall provide ten (10) year conditional warranty on materials and workmanship
 - 2. Manufacturer shall provide a one year guarantee on all OEM products provided.

1.02 Submittals: Manufacturer shall submit to engineer three copies of shop drawings and engineering calculations with a Professional Engineer wetstamp for each tank and three copies each of coating literature.

Part II: Products

2.01 Corrugated Galvanized Steel Aboveground Tank

- A. Product-Storage Requirements:
 - 1. Tank shall be vented to atmospheric pressure as the tank is not designed as a pressure vessel.
 - 2. Tank nominal capacity shall be _____ gallons.
 - 3. Net usable capacity shall be determined subtracting freeboard allowance from overflow elevation and suction vortex plate height or as required by code. Minimum usable capacity shall be _____ gallons.
- B. Loading Conditions: Tank shall meet the following design criteria:
 - 1. Static Load: Tank shall withstand Specific Gravity Loading of 1.0
 - 2. Joint Design per A.I.S.C. with 2:1 safety factor.

3. Deck Loads: 15 PSF unless otherwise specified by engineer.
4. Seismic Design: Tank shall be designed to withstand seismic forces in accordance with AWWA in conformance with UBC Seismic Zone of installation site.
5. Tank shall support accessory equipment-such as piping and ladders-as shown on tank drawings and when installed according to tank manufacturer's recommendations.
6. Soil bearing load shall be assumed at 1000 PSF. A soils report shall be required for foundation design if anchoring is required.

2.02 Accessories

A. Anchor Stirrups:

1. Stirrups shall be fabricated of A36 Carbon Steel as supplied by tank manufacturer and bolted to tank shell.
2. Number and location of stirrups shall be as required by seismic design or as indicated on tank drawings.
3. Anchor bolts shall be furnished and installed by foundation contractor upon completion of tank installation as specified on tank drawings.

B. Manways:

1. All tanks shall be equipped with a minimum 20" Diameter deck manway.
2. Shell manways are to be flanged and 24-inch-i.d., complete with gaskets, bolts and covers. Location(s) shall be shown on tank drawings.
3. Optional manway styles shall be indicated on tank drawings if required.

C. Venting:

1. Venting shall be 4" minimum and no less than 150% of largest outlet size.
2. Vent shall be provided with screen and cover to prevent insects or run-off from entering tank.
3. Location(s) shall be shown on tank drawings.

D. Level Gauges:

1. Liquid level indicators (if required) shall be installed adjacent to deck manway opening.

E. Ladders:

1. Ladders shall be the standard ladder as supplied by tank manufacturer.
2. External Ladder material shall be "Duragal" (galvanized steel) or as shown on tank drawings.
3. Ladders over 96" in height shall be equipped with OSHA cage or anti-fall device as shown on tank drawing.
4. Internal ladder materials shall be stainless steel or coated in conformance with tank interior.

F. Internal Overflow Weirs:

1. Overflow weir shall be conical, pipe trough, or box type as indicated on tank drawings.

G. Fittings:

1. All standard threaded fittings shall be constructed of carbon steel.
2. All standard threaded fittings shall be full or half-couplings, and of standard NPT sizes (1/2" thru 6" diameter. Reducers are to be used for smaller sizes where shown and provided by contractor.
3. All flanged nozzles shall be 150# RFSO single flanged nozzles unless otherwise indicated on tank drawings or specifications.
4. All flanged nozzles shall be furnished with a min. 1/2" carbon steel internal back-up plate.
5. Flange gaskets shall be 1/8" neoprene.
6. All fittings shall be installed in accordance with manufacturer's procedures.
7. All fittings shall be oriented per tank drawings prior to shipment or installed on site if tank is field assembled.

2.03 Coatings: Tank coating systems shall conform to paragraph(s) as indicated below:

SUPERCOAT	Tuff-Coat Powder I	Tuff-Coat Powder II	Tuff-Coat Powder III
Interior Coating: A Exterior: Mill Galvanized	Interior Coating: B Submerged Surfaces Only Exterior: Mill Galvanized	Interior Coating: B Submerged Surfaces Only Exterior Shell: C Deck: Mill Galvanized	Interior Coating: B All Surfaces Exterior Shell: C Including Deck

- A. Farbertite: Description: A coal tar compound containing an inert mineral filler and a corrosion inhibitor in a water-based system. It contains no Asphaltic material, resin, acid, caustic alkali, sulfur or compounds of sulfur. It contains no volatile ingredients that are toxic (*Not NSF Approved but suitable for potable water*)**
 - a. Apply as directed by manufacturer (IPA Systems, Inc., PA)
 - b. Apply two coats 5-10 mils DFT
 - c. Allow 24 hours minimum cure time before second coat
 - d. Allow 72 hours minimum cure time prior to submersion
- B. Fusion Bonded Powder Epoxy: Description: A NSF approved interior tank coating that is electro-statically applied and baked on forming an impervious membrane**
 - a. Steel grit blast prior to 4-Stage iron phosphate pretreatment
 - b. Interior color shall be "Dupont Tank Tan", 5 mils Average DFT
 - c. Apply and cure as directed by coating manufacturer (Dupont)
 - d. Touch-up using matching color urethane polymer
- C. Fusion Bonded Polyester Powder: Description: An exterior tank coating that is electro-statically applied and baked on forming an impervious membrane**
 - a. Steel grit blast prior to 4-Stage iron phosphate pretreatment
 - b. Exterior color shall be "Dupont Camel" or color as indicated on tank drawing, 3-5 mils DFT, 3.0 Average DFT
 - c. Apply and cure as directed by coating manufacturer (Dupont)
 - d. Touch-up using matching color polyurethane enamel
- D. DTM Acrylic: Description: An exterior tank coating that is spray applied and atmospherically cured**
 - a. Coat with galvanized pretreatment product such as galvanized primer
 - b. Exterior color shall be as specified on tank drawing, 3-5 mils DFT

Part III: Execution

- A. Foundation: Tank foundation shall be installed on firm and compacted soil. Tank pad shall be level.**
- B. Access: Tank shall be accessible by two-wheel drive 20' flatbed truck and trailer unless otherwise indicated on tank plans. Tank supplier shall be notified in advance of bid proposal if pad requires other equipment for access.**
- C. Erection: Tank shall be erected by factory authorized and trained personnel only. Work days or hours shall not be limited unless otherwise specified herein.**
- D. Tank shall not be filled with water for a minimum of seven (7) days of completion.**
- E. Tank shall be hydro-tested for leakage by filling tank to overflow level.**
- F. Tank shall be disinfected in accordance with tank manufacturer's recommendations per AWWA C-652 procedures.**