

SECTION 15455 - STORAGE TANKS

PART 1 - GENERAL

1.1 QUALITY ASSURANCE:

- A. Manufacturer's Qualifications: Firms regularly engaged in manufacturer of storage tanks of types and sizes required, whose products have been in satisfactory use in similar service for not less than 5 years.
- B. Installer's Qualifications: Firms with at least 3 years of successful installation experience on projects with storage tank work similar to that required for project.

Normally only specify ASME construction. Do not specify ASME stamp for expansion tanks and small storage tanks; this is very expensive.

C. Codes and Standards:

- 1. ASME Code Symbol Stamps: Comply with ASME Boiler and Pressure Vessel Code requirements for storage tank construction, and stamp with ASME Code symbol requirements.
- 2. AWWA Compliance: Comply with applicable requirements of American Water Works Association standards pertaining to steel water tanks.

1.2 SUBMITTALS:

- A. Product Data: Submit manufacturer's technical product data, with size, capacity, and weight of selected model, and furnish specialties and accessories indicated, and also installation and start-up instructions.
- B. Shop Drawings: Submit manufacturer's assembly type shop drawings indicating dimensions, weights, required clearances, and methods of assembly of all components.
- C. Maintenance Data: Submit maintenance data and parts lists for each type of storage tank. Include "trouble-shooting" maintenance guides. Include that data, product data, and shop drawings in maintenance manual; in accordance with requirements of Division 15.

PART 2 - PRODUCTS

2.1 MANUFACTURERS:

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Steel Water Tanks:
 - a. A.O. Smith; Consumer Products Div.
 - b. Amtrol, Inc.
 - c. PVI Industries, Inc.
 - d. Patterson-Kelley Co.; Div. of Harsco Corp.

2. Diaphragm Type Water Tanks:
 - a. A.O. Smith; Consumer Products Div.
 - b. Amtrol, Inc.
 - c. PVI Industries, Inc.
 - d. Patterson-Kelley Co.; Div. of Harsco Corp.

2.2 STEEL WATER TANKS:

- A. General: Provide steel water tanks of size, capacity, and orientation (vertical or horizontal) as indicated.
- B. Construction: Hot-dipped galvanized steel, constructed with nontoxic welded joints, for 125 PSI working pressure.
- C. Lining: Line interior of tanks with protective coating materials, of thicknesses which meet requirements of applicable regulatory standards for potable water tank linings.
- D. Support: Provide horizontal tanks with steel saddles; vertical tanks with steel legs.
- E. Manholes: Provide manholes and covers for tanks over 36inch diameter, of sizes and locations as indicated.
- F. Tappings: Provide tappings of size and location as indicated; threaded female for 2inch and smaller, flanged for 2-1/2inches and larger.
- G. Accessories: Provide relief valve; pressure gauge; air volume operated controls; air charging connections; and gauge glass, brass fittings, compression stops, and heavy guard.

2.3 DIAPHRAGM TYPE WATER TANKS:

- A. General: Provide pre-pressurized diaphragm type water tanks of size, capacity, and orientation (vertical or horizontal) as indicated.
- B. Construction: Hot-dipped galvanized steel, constructed with welded joints, for 125 PSI working pressure. Coat welds with application of zinc rich eutectic protective finish. Provide built-in butyl rubber diaphragm. Factory precharge tanks to minimum operating pressures.
- C. Lining: Protect interior of tanks with polypropylene linings which meet requirements of applicable regulatory standards for potable water tank linings.
- D. Support: Provide horizontal tanks with steel saddles; vertical tanks with steel legs.
- E. Tappings: Provide tappings of size and location as indicated; threaded female for 2inches and smaller, flanged for 2-1/2inches and larger. Provide 1 tapping to serve as both inlet and outlet connection.
- F. Accessories: Provide air charging and pressure relief valves, and pressure gauges.

PART 3 - EXECUTION

3.1 EXAMINATION:

- A. Examine areas and conditions under which storage tanks are to be installed, and substrate which will support storage tanks. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to Installer.

3.2 INSTALLATION OF WATER TANKS:

- A. General: Install water tanks as indicated, in accordance with manufacturer's installation instructions, and in compliance with applicable codes.
- B. Support: Set units on concrete pads, level and plumb.
- C. Connections: Make connections between water tanks and domestic water piping with shutoff valves and unions or flanges; as indicated.

3.3 FIELD QUALITY CONTROL:

- A. Testing: Upon completion of installation, pressure test water tanks hydrostatically to assure structural integrity and freedom from leaks in accordance with applicable sections of ASME Boiler and Pressure Vessel Code.

3.4 CLEANING:

- A. Flushing: Flush water tanks upon completion of installation in accordance with manufacturer's instructions, and comply with applicable health codes.

END OF SECTION 15455