

# **Modern Welding Company, Inc.**

## ***Manufacturing Subsidiaries Nationwide***

**LONG FORM:** Section 13215

**PRODUCT:** STI-P3, Double Wall Steel Underground Storage Tank  
Guide Specification

### **PART I General**

#### **1.0 Related Work Specifications:**

- 1.1. Cast-in-Place Concrete: Section 03300
- 1.2. Anchor Bolts: Section 05501
- 1.3. Plastic Pipe: Section 15064
- 1.4. Liquid Level Gauges: Section 15174

#### **2.0 Quality Assurance**

##### 2.1 Acceptable Manufacturer:

- A. Modern Welding Company of Owensboro, Inc.
- B. Modern Welding Company of Ohio, Inc.
- C. Modern Welding Company of Iowa, Inc.
- D. Modern Welding Company of Texas, Inc. (Houston)
- E. Modern Welding Company of Texas, Inc. (Rhome)
- F. Modern Welding Company of California, Inc.
- G. Modern Welding Company of Georgia, Inc.
- H. Modern Welding Company of Florida, Inc.

##### 2.2 Governing Standards:

- A. U.L. 58, Underwriters Laboratories, Inc., "Steel Underground Tanks for Flammable and Combustible Liquids"
- B. U.L. 1746, Underwriters Laboratories, Inc., "External Corrosion Protection Systems for Steel Underground Storage Tanks"
- C. NFPA 30, National Fire Protection Association, "Flammable and Combustible Liquids Code"
- D. NFPA 30A, National Fire Protection Association, "Code for Motor Fuel Dispensing Facilities and Repair Garages"
- E. Uniform Fire Code, International Fire Code Institute
- F. STI F961, Steel Tank Institute, "Specification for External Corrosion Protection of Steel Underground Storage Tanks".

- G. PEI/RP-100, Petroleum Equipment Institute, “Recommended Practices for Installation of Underground Liquid Storage Systems”
- H. PEI/RP-900, Petroleum Equipment Institute, “Recommended Practices for the Inspection and Maintenance of UST Systems”
- I. PEI/RP-1200, Petroleum Equipment Institute, “Recommended Practices for the Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST Facilities”

### 3.0 Submittals

#### 3.1 Shop Drawings:

- A. Contractor shall submit \_\_\_\_ copies of shop drawings for each tank. Location of fittings and accessories with specific dimensions shall be shown on all drawings.

#### 3.2 Catalog Data:

- A. Contractor shall submit \_\_\_\_ current copies of manufacturer’s literature.

#### 3.3 Certification:

- A. Each tank shall bear the U.L. listing mark for, “Underground Tank for Flammable Liquids Storage”

#### 3.4 Installation Instructions:

- A. Contractor shall submit \_\_\_\_ copies of manufacturer’s current installation instructions.

## PART II Products

### 4.0 Glasteel II Underground Storage Tanks

#### 4.1 Loading Conditions:

- A. Surface Loading: When installed according to manufacturer’s installation instructions, tanks shall withstand surface H-20 axle loads (32,000 lbs./axle).
- B. Internal Load: Primary tank shall withstand an air pressure test of 3-5 psi. Secondary tank shall be vacuum tested.

**WARNING:** Follow manufacturer’s testing instructions to avoid damage to the secondary tank. Do NOT apply positive pressure.

- C. Tanks shall be designed to support accessory equipment such as ladders, submerged pumps, containment sumps, etc., when installed according to manufacturer’s instructions and limitations.
- D. Tanks shall be designed in such manner to provide for monitoring of the interstice.
- E. Glasteel II tanks are built per Underwriters Laboratories, Inc. specification standards UL-58 / UL-1746 Part I.

#### 4.2 Produce Storage Requirements:

- A. Tanks shall be capable of storing liquids with specific gravity up to 1.1. Liquids with a specific gravity greater than 1.1 shall be reviewed by a Modern Welding Company, Inc. employee.
- B. Tanks are designed for operation at atmospheric pressure only. All primary tanks shall be vented.
- C. Tanks shall be capable of storing flammable and combustible liquids or fuel oils at ambient temperature, not to exceed 120°F.
- D. The annular space in a double walled tank shall be monitored via interstitial monitor pipe.

#### 4.3 Dimensional Requirements:

- A. Nominal Capacity of the tank shall be \_\_\_\_ gallons
- B. Nominal outside diameter of the tank shall be \_\_\_\_ inches
- C. Overall length of the tank shall be approximately \_\_\_\_ feet, \_\_\_\_ inches

### 5.0 Accessories

#### 5.1 Certification Plate:

- A. Underwriters Laboratories, Inc., U.L listing mark for “Underground Steel Tank for Flammable Liquid Storage”.

#### 5.2 Fittings (NPT):

- A. All threaded fittings and pipe nipples shall be of a material of construction consistent with the requirements of the Underwriters Laboratories listing. All fittings shall be protected using threaded plugs or suitable covers.
- B. Standards fittings shall be 4” NPT forged steel weld flanges, pipe nipples, etc. (If required by regulation, 5” NPT forged steel weld flange with 5” X 4” nylon dielectric bushings may be used).
- C. Interstitial monitoring shall be accomplished by utilizing the annular space access tube.
- D. Location: Refer to drawings

#### 5.3 Containment Piping Sump Collar:

- A. A containment sump shall be used to access all related piping, submersible pump, and other related equipment and accessories.

#### 5.4 Manways:

- A. All single and compartmentalized tanks shall be furnished with an access manway for performing routine maintenance.
- B. All manways shall be furnished with U.L. listed gaskets, bolts, and covers.

#### 5.5 Interior Painting and Coating:

- A. If required, see Paint Section

#### 5.6 Anchor Straps:

- A. If required, provide polyester anchor straps or other approved anchoring material as recommended by the tank manufacturer for each tank. The number, size, and location shall be as that shown on the contract drawings. If steel anchor straps are required, a suitable dielectric material shall be placed between the steel strap and tank at time of installation.

#### 5.7 Lifting Lugs:

- A. Specially designed lifting lugs or temporary lifting plugs shall be provided with each tank for installation. Lifting lugs are capable of sustaining the tank weight with a 2:1 safety factor.

### **PART III Execution**

#### **6.0 Installation**

- 6.1 Tank(s) shall be installed in strict accordance with the most recent installation instructions provided by the tank manufacturer, NFPA, UFC, PEI/RP-100, local ordinances, and other applicable codes.

**WARNING:** The interstice is never to be tested by applying positive pressure.

- 6.2 Tank(s) shall have an installation precision test performed by utilizing factory mounted testing unit to monitor the vacuum amount between the primary tank and its outer FRP secondary containment. When followed per the tank manufacturer's instructions, this test procedure meets the "Interstitial Tightness Test Method" for underground storage tanks in dry excavations.

**FORM:** STI-P3 Double Wall

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**SUBSIDIARIES:**

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