

# Modern Welding Company, Inc.

## *Manufacturing Subsidiaries Nationwide*

**LONG FORM:** Section 13205

**PRODUCT:** Flameshield™, Secondary Containment, Aboveground, Storage Tank for Flammable Liquids.  
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. Liquid Level Gauges: Section 15174
- 1.4. Piping: Section 15064
- 1.5. Painting: Section 09900

#### **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. 142, Underwriters Laboratories, Inc., "Steel Aboveground Tanks for Flammable and Combustible Liquids".
- B. NFPA 30, National Fire Protection Association, "Flammable and Combustible Liquids Code".
- C. NFPA 30A, National Fire Protection Association, "Code for Motor Fuel Dispensing Facilities and Repair Garages".
- D. NFPA 31, National Fire Protection Association, "Standard for the Installation of Oil-Burning Equipment".
- E. Uniform Fire Code, International Fire Code Institute
- F. B.O.C.A., National Fire Prevention Code
- G. SWRI 97-04, Southwest Research Institute, "Fire Tested Tank Performance Standard".

- H. PEI/RP 200, Petroleum Equipment Institute, "Recommended Practices for Installation of Aboveground Storage Systems for Motor-Vehicle Fueling"

### 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 Drawing Approval:

- A. Contractor shall receive drawing approval prior to product fabrication.

#### 3.3 Catalog Data:

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

#### 3.4 Certification:

- A. Each tank shall bear the Southwest Research Institute 97-04 label for "Secondary Containment Aboveground Tank for Flammable Liquids".

#### 3.5 Installation Instructions:

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

## PART II Products

### 4.0 Fire Tested, Secondary Contained, Aboveground, Storage Tanks for Flammable Liquids

#### 4.1 Materials:

- A. Only new material shall be used in the manufacturing process, and the manufacturer shall ensure that the material used meets all appropriate specifications and quality assurance requirements.
- B. Minimal material thickness of the tank(s) shall be per UL-142 requirements.

#### 4.2 Dimensions:

##### A. Dimensional Requirements (Cylindrical Tanks):

1. Nominal capacity of the tank(s) shall be \_\_\_\_ gallons.
2. Nominal inner tank diameter of the tank(s) shall be \_\_\_\_ inches.
3. Overall length of inner tank(s) shall be \_\_\_\_ feet, \_\_\_\_ inches.

##### B. Dimensional Requirements (Rectangular Tanks):

1. Nominal capacity of the tank(s) shall be \_\_\_\_ gallons.
2. Nominal inner tank width of the tank(s) shall be \_\_\_\_ inches.
3. Nominal inner tank height of the tank(s) shall be \_\_\_\_ inches.
4. Overall length of inner tank(s) shall be \_\_\_\_ feet, \_\_\_\_ inches.

#### 4.3 Loading Conditions:

- A. Tanks shall meet the following design criteria.

##### B. Internal Load:

1. Cylindrical Tanks: Shall withstand an air pressure test of 3 to 5 psi.
2. Rectangular Tanks: Shall withstand, but not exceed, an air pressure test of 3 psi.

- C. Tank(s) shall be designed to support accessory equipment such as ladders, pumps, floating suction, etc. when installed according to manufacturer's instructions and limitations.
- D. Tank(s) shall be provided with suitably designed and located lifting lugs which have a 2:1 safety factor.

4.4 Product Storage Requirements:

- A. Tank(s) shall be capable of storing liquids with a maximum specific gravity up to \_\_\_\_\_.
- B. Tank(s) shall be designed for operation at atmospheric pressure only. Both primary and secondary tanks shall have openings of sufficient size to meet normal and emergency venting requirements as stated in U.L. 142, UFC, and NFPA.
- C. Tank(s) shall be capable of storing gasoline, gasohol, jet fuel, avgas, diesel fuel, methanol, or fuel oil at ambient temperatures.

**5.0 Accessories**

5.1 Certification Plate:

- A. Southwest Research Institute label 97-04 "Secondary Containment Aboveground Tank for Flammable Liquids" shall be affixed to each tank.

5.2 Fittings (Threaded/NPT):

- A. All threaded fittings shall be of a material of construction consistent with the requirements of the Underwriters Laboratories. All fittings shall be protected using threaded plugs or suitable closure caps.
- B. Fitting Schedule:

Qty.	Size	Type	Use
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

5.3 Fittings (Flanged Nozzles):

A. All flanged nozzles shall be of a material of construction consistent with the requirements of the Underwriters Laboratories. All nozzles shall be protected using suitable closure caps.

B. Nozzle Schedule:

Qty.	Size	Type	Use
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

5.4 Manways:

A. Manways shall conform to Underwriters Laboratories 142 standard with regard to construction, bolting and gaskets.

5.5 Steel Tank Supports:

A. Design of the steel supports shall be per approved UL listing and be able to support the weight of the tank filled to capacity.

5.6 Fitting, Manway, and Support locations shall be referenced on manufacture drawings.

**PART III Execution**

**6.0 Installation**

6.1 Testing:

A. Cylindrical Tanks:

- The primary and secondary tanks shall successfully complete an air pressure test prior to installation. While maintaining pressure of 3-5 psig on the primary tank, the annular space bounded by the primary and secondary containment tank shall be pressurized to 1 1/2 to 3 psig. The secondary tank shall then be checked for tightness.

B. Rectangular Tanks:

- The primary and secondary tanks shall successfully complete an air pressure test prior to installation. While maintaining pressure of 1.5 psig on the primary tank, the annular space bounded by the primary and secondary containment tank shall be pressurized to 1 psig. The secondary tank shall then be checked for tightness.

6.2 Tank shall be installed in strict accordance with the most recent installation instructions provided by the tank manufacturer, UFC, NFPA, local ordinance, recognized engineering procedure, and other applicable codes.

**FORM:** Flameshield™

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**SUBSIDIARIES:**

Modern Welding Company of Owensboro, Inc.  
Owensboro, KY (270) 683-5323  
Modern Welding Company of Ohio, Inc.  
Newark, OH (740) 344-9425  
Modern Welding Company of Florida, Inc.  
Orlando, FL (407) 843-1270  
Modern Welding Company of Texas, Inc.  
Houston, TX (713) 675-4211  
Modern Welding Company of Texas, Inc.  
Rhome, TX (817) 636-2215  
Modern Welding Company of Iowa, Inc.  
Burlington, IA (319) 754-6577  
Modern Welding Company of California, Inc.  
Fresno, CA (559) 275-9353  
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