



Scope of Work

Underground Horizontal Gasoline Storage Tank (UL 58)

Capacity: 100,000 Liters

Type: Underground Horizontal **Single** Wall Tank

Standard: **UL 58**

ASTM A36 1500×6000X8 mm

Stored Product: Gasoline

1. General Scope

This scope includes design, supply, fabrication, transportation, installation, testing, and commissioning of an underground gasoline storage tank in accordance with **API 650** standards.

2. Tank Specifications

- Horizontal underground steel tank
- **Single-wall** construction with interstitial leak detection
- Design life minimum 25 years

Each Tank shall be equipped with the following opening as follow:

- 1/ Main manhole of 24" diameter and height 20cm , manhole shall be made of 6 mm steel plate complete with bolted cover.
- 2/ One ventilation pipe of 3" diameter and 15cm of height.
- 3/ One dip-hatch nozzle of 3" diameter and 15cm height.The nozzle shall be made of 3" pipe sch-40 fixed on it 3" flange
- 4/ Tank inlet nozzle of 2" diameter and it shall be made of 2" pipe sch-40 fixed on it 2" flange class-150 externally. **perforated pipe 2" length shall up to the 20 cm from the tank bottom.**
- 5/ Tank outlet nozzle of 2" diameter and it shall be made of 2" pipe sch-40 fixed on it 2" flange class-150 externally

3. Design & Fabrication

- Carbon steel material as per **UL 58 standard**
- **shell thickness: minimum 8 mm**

- Fully welded construction with certified welders
- Manholes, vents, filling, suction, emergency vent nozzles

4. Corrosion Protection

- External epoxy/polyurethane coating suitable for burial (bitumen two layers with Damoria is usual practice)
- Cathodic protection system (sacrificial cathodic protection)
- Internal protection suitable for gasoline (no need for Gasoil)

5. Leak Detection System

- Interstitial monitoring port
- Leak detection sensor with alarm

6. Civil Works

- Excavation and soil preparation
- Sand bedding or lean concrete
- 1½brick wall around the tanks pit using 1:8 c/s mortar for height of 1.0m.
- Provide and lay R.C mix 1:2:4 cover for tanks 20cm depth with top and bottom reinforcement bars 10 mm @150mm c/c B/W [Both Ways] . For the area of tanks [cover extend 1m in each sides to rest on soil] as per detail drawings.
- Ditto but for beam (Size: 400mm depth X 250mm width) including the reinforcement bars as per attached drawings.
- Tank installation and alignment
- Backfilling with proper compaction
- Manhole chambers and surface reinstatement

7. Mechanical Works

- Fuel filling, suction, and vent piping
- Approved valves and flame arrestors

8. Electrical & Safety

- Grounding and bonding
- Explosion-proof electrical components

- Alarm and monitoring panel

9. Testing & Inspection

- Factory acceptance tests
- Site testing as per **UL 58**
- Leak detection system testing

10. Documentation & Handover

- Test certificates
- Operation & maintenance manuals