

SHORT FORM SPECIFICATIONS

The contractor shall provide aboveground steel oil/water separator, in types (single-wall or double-wall) and sizes as shown on the drawings. The separators shall be manufactured by Containment Solutions. Separators shall be tested and installed according to the current installation instructions (Containment Solutions' Pub. No. OWS 2038) provided with the tank.

LONG FORM SPECIFICATIONS**1. GENERAL**

1.1. Related Work

1.1.1. Drop-out box: Contractor to furnish and install precast or fiberglass drop-out box.

1.1.2. Plastic pipe: Contractor to furnish and install all necessary PVC drainage pipe and fittings. Contractor shall install a butterfly valve between the drop out box and tank inlet, as well as one between the outlet of the separator and the effluent pipe.

1.2. Quality Assurance

1.2.1. Acceptable Manufacturer: Containment Solutions, Inc., Conroe, TX

1.2.2. Governing Standards

1.2.2.1. Applicable sections of U.L. 142 Underwriters Laboratories, Inc. Standard for Steel Aboveground Tanks for Flammable and Combustible Liquids.

1.2.2.2. National Fire Protection Assoc. (NFPA 30) Flammable and Combustible Liquids Code, (NFPA 30A) Automotive and Marine Service Station Code, [NFPA 70) National Electrical Code.

1.2.2.3. Applicable sections of "Petroleum Equipment Institute Publication RP200; Recommended Practices for Installation of Aboveground Storage Systems for Motor Vehicle Fueling".

1.2.2.4. API manual on disposal of refinery wastes

1.2.2.5. API bulletin no. 421

1.2.2.6. API bulletin no. 1630 first edition

1.2.2.7. Coast Guard Specification 46 CFR 162.50 - 46 CFR Chapter 1

1.2.2.8. EPA Test Method 413. 1, Oil and Grease, Total Recoverable (Gravimetric, Separatory Funnel Extraction).

1.2.2.9. EPA Test Method 413.2, Oil and Grease, Total Recoverable (Spectrophotometric, Infrared).

1.3. Submittals

1.3.1. Shop Drawings: Contractor shall submit _____ copies of shop drawings for each OWS tank. Drawings shall include all critical dimensions, locations of fittings and accessories.

1.3.2. Contractor shall submit _____ copies of manufacturer's literature including _____ copies of manufacturer's current installation and maintenance instructions to the Owner.

2. PRODUCTS

2.1. Aboveground Horizontal Oil/Water Separators

2.1.1. Provide _____ gallon(s) aboveground steel oil/water separator tank(s), piping, necessary pumps, venting, vent piping, and monitoring equipment required to make a complete installation ready for use.

2.1.2. Product Storage Requirements

2.1.2.1. Oil/Water Separator shall be designed for aboveground, top at grade level, or below ground (in a vault) installation. Separator shall be rectangular horizontal steel vessel designed for storage of flammable and combustible liquids and have the structural strength to withstand static and dynamic loading under all normal operating conditions. Separator shall be designed to be vented to atmosphere.

2.1.2.2. Separator shall consist of a vessel having the inlet and outlet connections on the same end for convenient installation, oleophilic debris plates to promote coalescence of oil and reduce inlet flow velocity. Separator shall have removable modular inclined corrugated parallel plate system consisting of:

- Dedicated oil removal and solids shedding surfaces to prevent remixing of oil and settleable solids.
- Horizontally stacked (45° angle) oleophilic polypropylene plates with ¼ to ½" plate separation.
- Full modular assemblies consisting of a polypropylene base, plate pack, modular form and handles for easy removal and inspection.

2.1.2.3. Separator shall consist of effluent chamber for increased retention time, oil retention, and separated oil accumulation, effluent transfer pipe(s), and effluent downcomer to allow discharge from clearwell chamber. Separator shall have steel cover(s) with handles, gasket and bolts for easy removal for inspection and service of each chamber.

- 2.1.2.4. Inlet and outlet shall be located on the same end of the Oil/Water Separator creating laminar flow characteristics for a distance equal to twice the length of the vessel, as follows:
 - ____ inch diameter (NPT) threaded influent connection.
 - ____ inch diameter (NPT) threaded effluent connection.
- 2.1.2.5. Separator shall have top fittings for vent and oil interface level sensor (or waste oil pump control sensor).
- 2.1.2.6. Internal surfaces to be commercially prepared and coated with (4 to 8 mils dry film thickness) marine and industrial grade corrosion resistant epoxy. Standard color: Black
- 2.1.2.7. External surfaces to be commercially prepared and coated with (3 to 5 mils dry film thickness) resistant industrial paint. Standard color: Desert Sand

2.1.3. Capability and Dimensional Requirements

- 2.1.3.1. Separator shall be _____ long _____ wide _____ high.
- 2.1.3.2. Nominal volume of the separator shall be _____ gallons.
- 2.1.3.3. Intermittent flow rate shall be _____ GPM.
- 2.1.3.4. Total spill capacity shall be _____ gallons.
- 2.1.3.5. Total oil storage capacity shall be _____ gallons.
- 2.1.3.6. Inlet oil specific gravity shall range between .68 to .95.
- 2.1.3.7. Inlet oil concentration shall be no more than 200,000 parts per million.
- 2.1.3.8. Effluent discharge quality shall be _____ ppm free oil and grease.

2.2. Accessories

2.2.1. Pump Control Systems and Pumps

- 2.2.1.1. Influent pump and control system to activate inlet (positive displacement) pump at pre-determined levels.
- 2.2.1.2. Effluent (waste water) pump control system to activate and deactivate an effluent discharge pump at pre-determined levels in the discharge well (clearwell).

2.2.2. Oil/Water Separator Electronics

- 2.2.2.1. Provide control panel and required sensors, probes and gauges as provided by tank manufacturer.

3. EXECUTION

3.1. Installation of Oil/Water Separator

- 3.1.1. Tanks shall be unloaded from truck using appropriate lift equipment.
- 3.1.2. Contractor shall test and install tank according to the current installation and start-up instructions provided with the tank (refer to Containment Solutions Pub. No. OWS 2038).
- 3.1.3. Tanks shall be installed in accordance with applicable sections of "Petroleum Equipment Institute Publication RP200; Recommended Practices for Installation of Aboveground Storage Systems for Motor Vehicle Fueling".

3.2. Maintenance Instructions

- 3.2.1. Maintenance is recommended for continued separator performance at the following times (whichever comes first):
 - 3.2.1.1. Once per year
 - 3.2.1.2. When sludge accumulates to 12" in depth
 - 3.2.1.3. When the effluent water contains high contaminant levels
- 3.2.2. See Containment Solutions Pub. No. OWS 2037 for maintenance requirements.

4. LIMITED WARRANTY

4.1. Limited Warranty

- 4.1.1. Limited warranty shall be Containment Solutions' limited warranty in effect at time of delivery.

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