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Top Mount Installation

Sub-grade perpetration:

Lining installation shall not proceed until a proper base has been prepared to accept the membrane lining. Base material shall be free from:

- Angular rocks
- Roots
- Grass
- Vegetation
- Other foreign matter

Base shall be level and or uniformly sloping as indicated on the drawings (as per design requirements). Base area must exceed containment dimensions by 1m around the entire containment system.

TCA Marketing Ltd. strongly recommends the use of a cushioned Geotextile on both sides of the liner to compensate for any irregular surface or lack of compliance with above specifications.

Markings and Layout

1. Using inverted paint mark out the diameter of the containment structure
2. Rollout/unfold base layer of Geotextile
3. Rollout/unfold LLDPE liner
   a. Lay liner over any pilings or pipe penetrations
4. Rollout/Unfold second layer of Geotextile (where applicable)
5. Fold in corners of liner and Geotextile as pictured in figure 1

Figure 1

Folded liners do not need to be exactly as pictured, so long as the marked perimeter of the containment is completely exposed and visible.

For installing round systems skip brace assembly instructions.
**Unfolding Liner**

Place liner at one corner of the containment area.

Unroll liner to the length of the containment area.

Pull liner across width of the containment area.
**Brace assembly:**

Using nuts and bolts provided attach brace to plate by aligning the pre cut holes in each piece.

Once secure the brace and plate can be placed around the containment.

**Steel Assembly:**

Lay sheets around containment perimeter (Figure 3)

Bolt sheets together using fasteners provided (Figure 4)
**Liner Attachment:**

Once containment wall is securely fastened, unfold the liner and Geotextile. Lay extra liner over the lip of the wall and clamp in place. The liner must contact the wall at both the base and the top. (figure 5)

Using fasteners provided (10-16 x 3/4” Tech screw) attach top clamp to wall lip securing the liner in place between the two. (figure 6)

If your system requires pipe or pile penetrations refer to the “Pile Boot Installation Procedure” at the back of this manual, prior to attaching the top clamps.

Once all top clamps are securely fastened trim off excess liner at the bottom of the top clamp.

Lay down the top layer of Geotextile and add aggregate material as required by the drawings.
PILE BOOT INSTALLATION GUIDELINES

Following is the installation procedure for the installation of LLDPE pile boots within a secondary containment system. These steps are applicable to installation of boots using a 30mil or 40mil LLDPE liner.

1. All piles shall be cut to elevation to eliminate any irregularities on the top of the pipe.
2. Area around the piling shall be smooth and free of large obstructions and any snow shall be removed.
3. Base layer of geotextile will be placed and cut around piling to eliminate bunching of the fabric under the boot.
4. Boot shall be placed on piling and cut to diameter to ensure a tight fit around the pipe. Care must be taken when cutting the boot for safety reasons as slips with a knife can cause injury.
5. Boot will be pulled down the piling to the ground; boots cannot be elevated off the ground.
6. Liner can now be deployed and cut around the pilings. Liner must be stretched into place to minimize wrinkles that will inhibit the welding process. Liner must be cut in a circular fashion around the pilings to allow for one continuous weld.
7. Extrusion welder will be preheated to the following temperatures. Weld barrel 500 degrees to 520 degrees. Preheat 400 degrees, the preheat temperature may be less if summer conditions exist as too much heat will cause deformation of the liner.
8. Liner will be heat tacked to the pile boot around the piling. The heat tack will ensure that there is no movement of the liner during the weld process.
9. Liner shall be clean and dry around the weld area. Grinding may be necessary to remove soils and surface tension in liner that has been installed prior to boot installation.
10. Welder shall be purged prior to extrusion welding to ensure any cooled extrudate is removed.
11. Welding can begin. Welder die shall be kept on center of overlap to ensure an equal amount of extrudate on both surfaces.
12. A consistent forward welding speed shall be maintained to ensure a smooth uniform bead.
13. Weld shall be allowed to cool and a visual inspection will be performed. This may consist of a pick test to ensure proper bonding of the weld to the surfaces.
14. Boot will be clamped to the piling using a stainless gear clamp. After the boot is clamped any excess material will be trimmed.
15. A bead of polyurethane caulking will be applied above the clamp where the boot and piling meet.
Warranty

Warranty claims on installed products may be submitted by photograph within 30 days of discovery. Warranty claims on products and components not yet installed must be returned to a TCA warehouse at purchasers expense for inspection.

Steel

TCA Marketing Ltd. (TCA) warrants all parts and components of its secondary containment systems are free from defects in materials and workmanship under normal use and service and when properly installed for a period of 5 years. The obligation of TCA is limited to repairing or replacing the defective product or component. This warranty does not include damages resulting from catastrophic weather, harmful chemicals, and abuse of the membrane by machinery, people, animals, or ground settlement.

Liner

TCA warrants the LLDPE and HDPE installed within the secondary containment system to be free of defects and able to withstand normal weathering for a period of 5 years. TCA warrants that the liner be installed properly, following the directions provided in a manner to ensure it will be free of damages from normal use.

This warranty does not include damages resulting from catastrophic weather, harmful chemicals, and abuse of the membrane by machinery, people, animals, or ground settlement.

Should premature loss occur within the scope of the warranty TCA will repair or replace the membrane. In the event that repairs are required please contact us immediately and we will assess the damage and make all necessary repairs.

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