

## **7.5 TRANSITION FITTING (FOR SAFE-TANK® SYSTEMS)**

### **1. Introduction**

The following instructions are intended to aid in the installation of Poly Processing Company's new Transition Fitting Assembly. This fitting assembly was developed for a containment system such as the SAFE-TANK® product or a standard primary tank within a Poly Processing Company manufactured containment tank. Figure 1 shows the major components of the New Transition Fitting assembly.

### **2. Installation Steps**

If tank(s) have a partially installed transition fitting(s) from the factory, proceed directly to Step 8 to complete the installation required in the field.

Step 1: Determine the placement of the transition fitting on the containment tank. The knuckle radius dimensions must be taken into consideration when determining this elevation. Placing the fitting too high or too low will not allow for the proper seal.

Step 2: Establish the center point/elevation of the transition fitting on the containment tank and drill a hole  $\frac{1}{2}$ " larger in diameter than the fitting size being installed on the primary tank. For example, drill a  $2\frac{1}{2}$ " hole for a 2" fitting. After drilling the hole in the containment tank, verify the primary tank external bottom is sitting flush on the containment tank internal bottom. Do not lay out the bolt pattern of the transition fitting.

Step 3: After verifying the proper fit of the primary tank inside the containment tank, use the nipple provided with the transition fitting to determine the elevation on the primary tank. This is accomplished by inserting the nipple through the hole that has been drilled in the containment tank. Paint or other media must be applied to the end of the nipple to mark the location on the primary tank. Also, a torpedo level or other means must be used to assure that that nipple is in a level plane when marking the proper location on the primary tank.

Step 4: Drill or cut out the existing hole in the containment tank to  $9\frac{1}{8}$ " diameter. This allows proper expansion and contraction of the tank without creating stress on the nipple that will be installed as well as allowing for servicing or maintenance of the fitting on the primary tank.

Step 5: Install the primary tank fitting using typical fitting installation instructions for the specific type fitting as noted previously in this manual.

Step 6: Install onto the primary tank fitting the nipple/pipe (hand tight). Slide the transition fitting and adapter plate without the grommet over the nipple and lay out the bolt pattern for the transition fitting. Mark the transition fitting and the tank so as to key them for proper bolt hole alignment during subsequent installation in the field.

Step 7: Raise the primary tank high enough to install stud bolts with gaskets in the containment tank. Make sure that gaskets are installed on the stud bolts prior to installation. Use PE retaining washers to hold stud bolts in place. Lower the primary tank back down in the containment tank. The remaining components of the transition fitting assembly shall be installed in the field.

Step 8: Install the transition fitting using the same method of installing a flange per this manual. Align the key marks on the transition fitting and the containment tank. Install the stainless steel back up ring

on the outside of transition fitting flange in order to provide a more uniform seal. This step is done for both of the transition fitting flanges. Tighten the adapter plate to transition fitting in a crisscross fashion as if tightening a tire rim.

Step 9: Teflon tape and/or paste the threads on one end of the nipple and install it into primary tank fitting. Threads on the other end of the nipple should be wrapped with a removable protective slick tape.

Step 10: Install the proper size grommet into the adapter plate. Cover the nipple with hand soap or slick material to help slide adapter plate and grommet over the taped end of then nipple. This step is terminated when the adapter plate reaches outside face of the transition fitting flange. Install the stainless steel back up ring on the outside of the transition fitting flange, not on the adapter plate, in order to provide a more uniform seal. Tighten the adapter plate to the transition fitting in crisscross fashion as if tightening a tire rim.

Step 11. Install flexible connection on outside threads of nipple to allow for contraction and expansion of tank thus reducing stress against the tank. Remember to use Teflon tape and/or paste. Failure to use a flexible connection at this point will void all warranty.

Step 12: Hydro-test tanks with standing water for at least 24 hours before putting into service.

### 3- Special Considerations:

1. Shipping requirements need to be reviewed prior to installation of transition fittings. Field installation for portions of the Transition Fitting Assembly will be required.
2. For maximum drainage, a siphon leg is recommended on the primary tank fittings. Materials must be compatible with chemical being stored. (i.e. plastic, gasket, bolts, etc.)
3. Component materials must be compatible with chemical being stored. (i.e. gaskets, bolts, etc.) Maximum number of transition fittings that can be used on a single unit is two. Fittings must be no greater than 90 degrees apart.

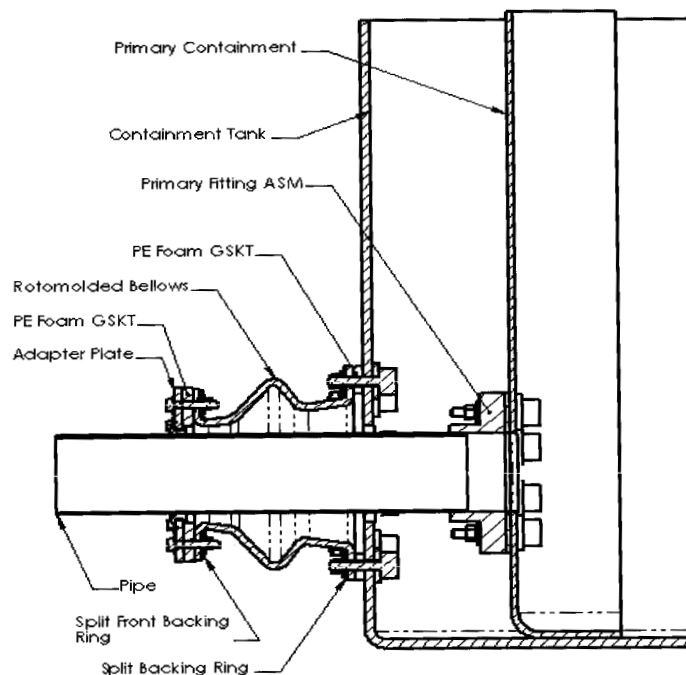


Figure 1