Field installation of sightglass in surge tank

The following instructions are to help facilitate the installation of Vortex Venture's sightglass in the shell section and cone sections of surge tanks. There are three parts to the sightglass, (1) Pipe Nipple, which is the piece that will be welded into the surge tank wall (2) Sightglass housing, which is the piece that holds the viewing disk (3) Coupling, which connects the nipple and housing. See also figure 6.

Determine location where the sightglass will be mounted in the surge tank. Remove any paint or coating from this area to expose the metal surface. Once sufficient area is cleared for marking, mark the center point and then make four equally spaced marks that are measured from the center mark equal to the radius of the outside diameter of the Pipe Nipple that is to be installed as shown in figure 1.

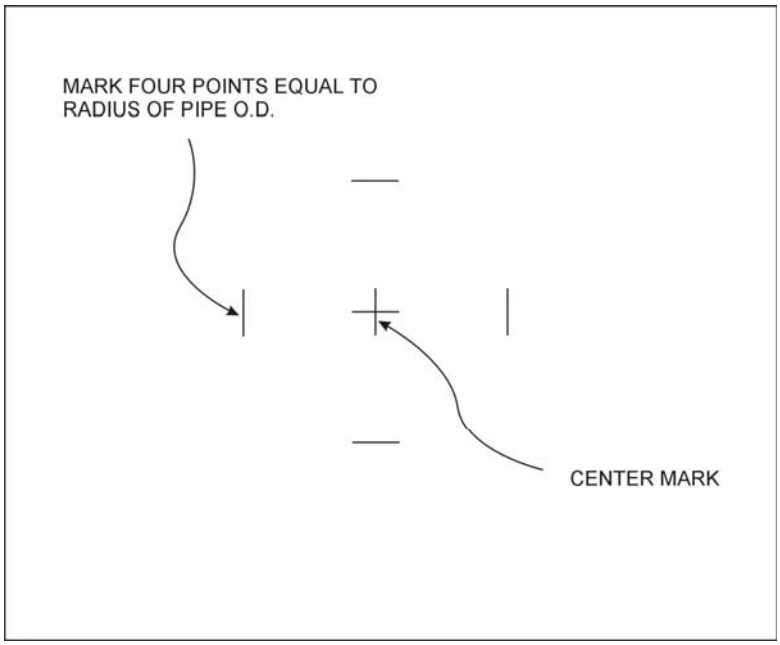

FIGURE 1

When making the marks make sure that the lengths are projected lengths taken from the same elevation as the center mark when working with curved surfaces to insure a round cut will be made.

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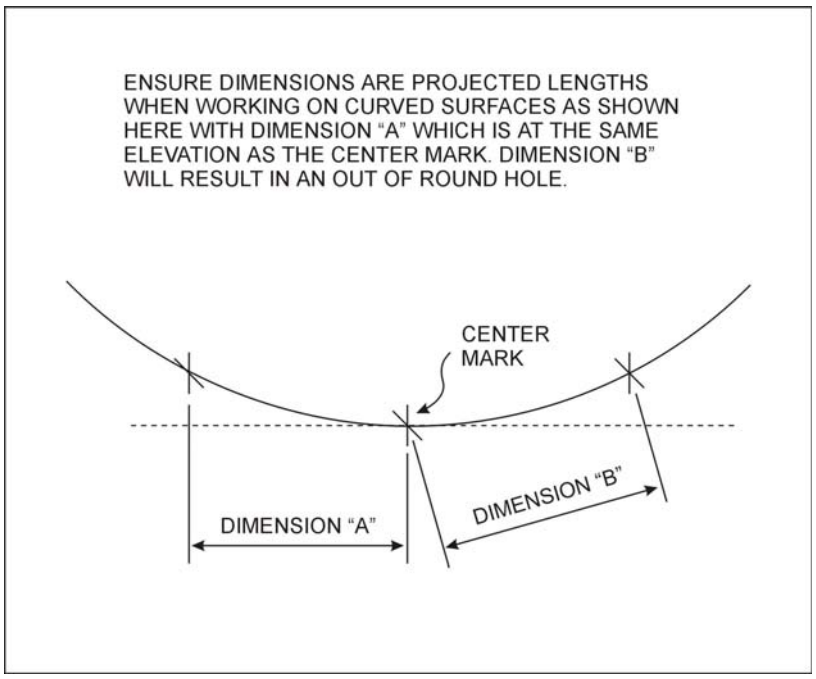

FIGURE 2

Finish marking the outline of the circle using the pipe nipple to help develop the correct curvature. Take the pipe nipple and line up with the four marks then mark along the outside using a straight edge marker or scribe, taking care to insure that pipe nipple remains perpendicular to surface being marked. After marking is done you can inspect the accuracy by examining the pipe nipple and marking from the end of the pipe nipple to see that there is no caps or over lapping as shown in figure 3.

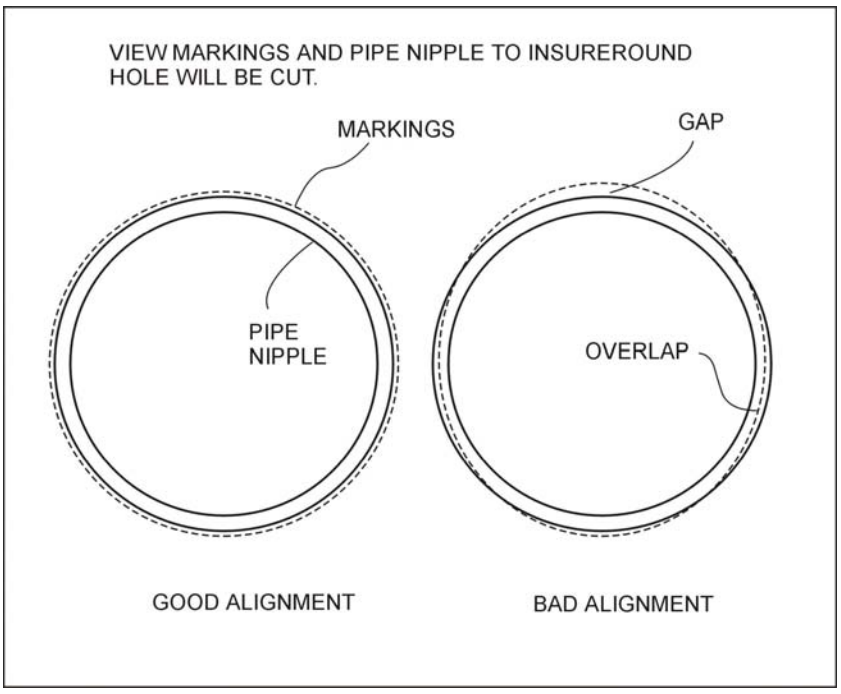

FIGURE 3

Cut hole into tank wall and place pipe nipple inside hole leaving approximately 1inch clearance between the tank wall and the groove in the pipe nipple. Mark the intersecting contour of the tank on the pipe then remove pipe nipple and cut off excess material behind the contour marking.

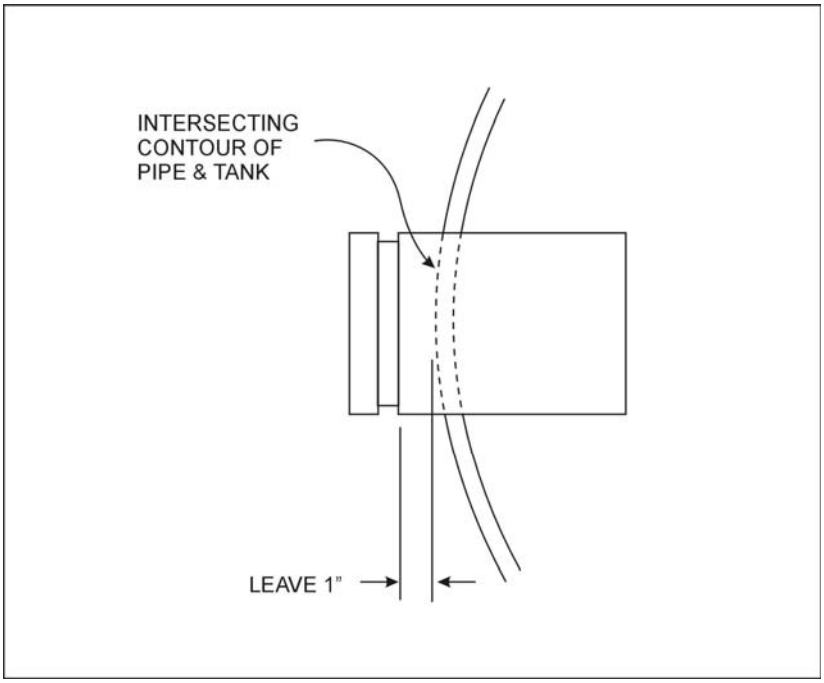

FIGURE 4

After trimming the pipe nipple to achieve same contour as the tank wall place the pipe nipple into the hole and line up flush with tank I.D. (inside diameter). Measure the thickness of the tank wall and marking the pipe off the end the same amount will help insure the pipe is flush. Weld pipe nipple in place as indicated in figure 5.

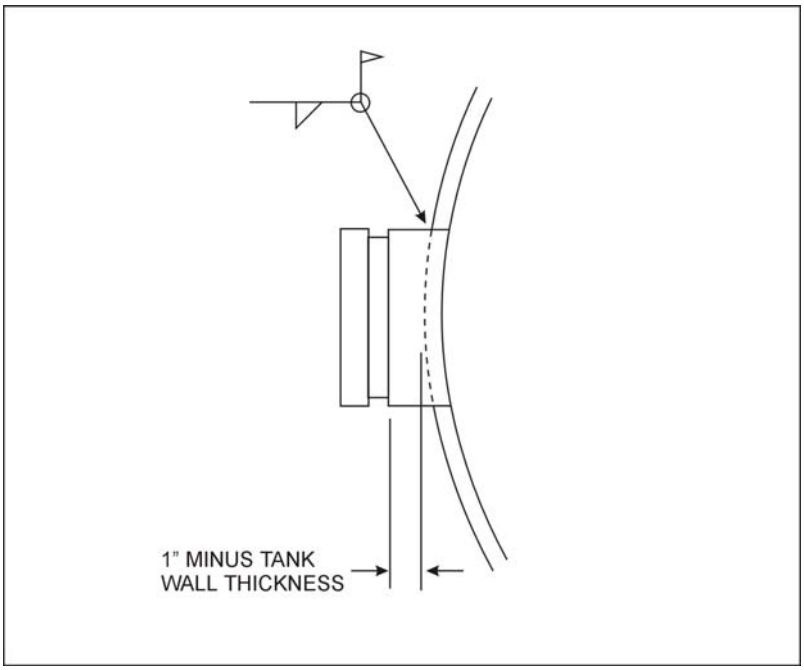

FIGURE 5

Recoat the bare metal surface with a polyamide epoxy primer to a dry film thickness of 3 mils, intermediate coating of epoxy, 4 mils thick and top coat of urethane paint 2-3 mils DFT. Complete assembly by mounting the sightglass housing over the pipe nipple and securing in place with the coupling.

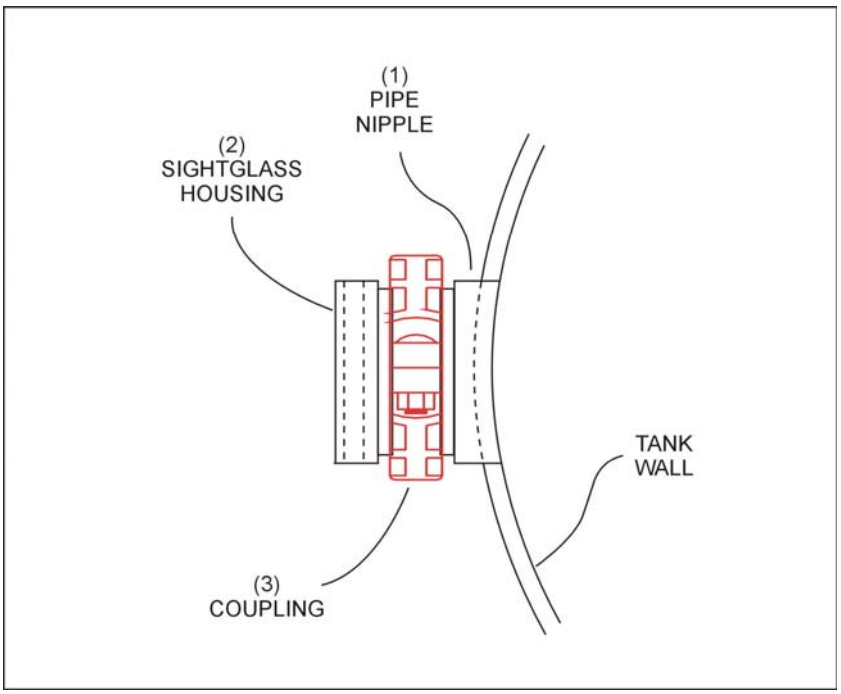

FIGURE 6