PLASTEEL® UNDERGROUND TANK
APPENDIX B

INTERSTITIAL VACUUM TEST (IVT)

1.0 **Introduction:** This test method has been developed by PLASTEEL INC. to meet the E.P.A. Alternate (Non-Volumetric) Tank Tightness test procedures. The IVT has been verified by a third party to be capable of detecting a 0.1 gal/hr leak rate with a probability of detection of 100% when all of the testing criteria are met. The false alarm rate for a tight tank is less than 5%. It is impossible to maintain a steady vacuum if a leak is present. This test is not necessary to attain the PLASTEEL® tank warranty. This test is offered as a stand alone leak tightness test method.

2.0 **Application:** The IVT is applicable to the PLASTEEL® ELUTRON® (jacketed) Double-wall tank and the PLASTEEL® Composit Double-wall tank. For compartmented tanks, consult the factory for the test time.

3.0 **Authority:** The Jurisdiction Having Authority (JHA) will determine whether the double-wall UST must be subject to a leak tightness test before placing the UST in service.

4.0 **Pre-Delivery Procedure:**

4.1 Read and understand the PLASTEEL® Tank Installation instructions and Appendix B before attempting the interstitial vacuum test. Contact the PLASTEEL® tank manufacturer if you have any questions.

4.2 Consult the PLASTEEL® tank manufacturer before the tank is shipped to ensure that the tank is delivered with the test gauge assembly. This assembly is an optional piece of equipment supplied by the tank manufacturer.

4.3 Prior to shipment from the factory, you may request that the manufacturer deliver the tank with the vacuum established.

4.4 Upon delivery, the delivery document will indicate the correct vacuum gauge reading. Call the factory if the gauge reading does meet the gauge reading specified on the delivery document.

4.5 To maintain the vacuum during the unloading and installation phases, extreme care must be taken to ensure the IVT gauge assembly is not jarred, struck or moved in any manner. Call the factory for instructions if the vacuum has decreased.

5.0 **Test Procedures:**

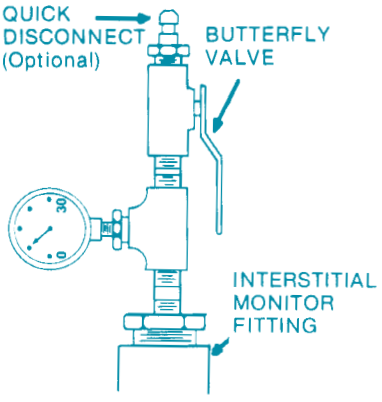

FIGURE 5.0: VACUUM GAUGE TEST ASSEMBLY (TYPICAL). ACCURACY: ASME (ANSI) GRADE B, ± 2%, 0-30"Hg, with 1"Hg GRADUATIONS.

5.1 If the vacuum was established at delivery and has not decreased during the unloading and installation phases, you may by-pass 5.2 and 5.3

5.2 Install the vacuum gauge test assembly (see Fig. 5.0) in the monitor access NPT coupling on the tank top centerline. Ensure that any additional monitor access couplings are properly sealed with threaded plugs.

5.3 Connect the vacuum pump to the test gauge assembly and draw down to 10" hg. Record initial gauge reading, date, and time of day in Part IV of the Certificate. The initial pump down on the ELUTRON® jacketed tank may require reiteration due to the slow nature of air movement in the interstitial space.

5.4 To ensure a vacuum has been established, the gauge must read 10" hg. for three (3) hours without any decrease on the gauge before proceeding with 5.6. Contact the factory if the vacuum cannot be established per this paragraph.

5.5 Complete sections II and III of the Certificate of Tightness Test.

5.6 Refer to the Test Time Table (Figure 6.0) to determine the correct minimum time period for a valid test.

Begin timing the test after completing 5.4. Record the nominal tank capacity, primary tank product and required test hours in Part IV of the Certificate.

5.7 After the required test time has passed, observe the gauge reading and record the reading, date and time of day in Part IV of the Certificate.

5.8 Test Conclusions: The tank has passed the leak tightness test when the final gauge reading has not decreased from the initial gauge reading of 10" Hg. If other observations are made, consult the tank manufacturer.

Test Time Tables: The table in Figure 6.0 lists the minimum test period (in hours) to perform a valid IVT with a dry (air only) primary tank. The IVT test may be performed with gasoline, diesel or water in the primary tank. Consult the PLASTEEL® tank manufacturer for the specific test time for these situations.

TEST TIME TABLE: DRY PRIMARY TANK		
CAPACITY (GALS.)	JACKETED (HOURS)	COMPOSIT (HOURS)
500	4.0	4.5
1,000	4.0	5.5
2,000	4.0	8.0
3,000	4.0	9.0
4,000	4.0	9.5
5,000	4.0	10.5
6,000	4.0	11.0
8,000	4.0	13.0
10,000	4.0	14.5
12,000	4.0	15.5
15,000	4.0	17.5
20,000	4.0	20.5
30,000	4.0	37.5
40,000	4.0	45.5
50,000	4.0	53.0

FIGURE 6.0

YOUR Licensed PLASTEEL® tank manufacturer is: