

## **PROCEDURE FOR CONDUCTING AN HYDROPNEUMATIC TEST IN GAS-TIGHT TANKS**

### **NECESSARY ITEMS**

1. An air compressor (diesel powered for very big tanks, electric for medium and small tanks)
2. A syphon to in the top of the tank. Of sufficient diameter to allow for quick release of pressure.
3. An air hose for the sensing line. At least 3/4 " diameter air hose.
4. A manifold for releasing the pressure inside the tank.
5. A water hose manometer in inches.
6. A dial manometer with a scale between 0 and 5 psi

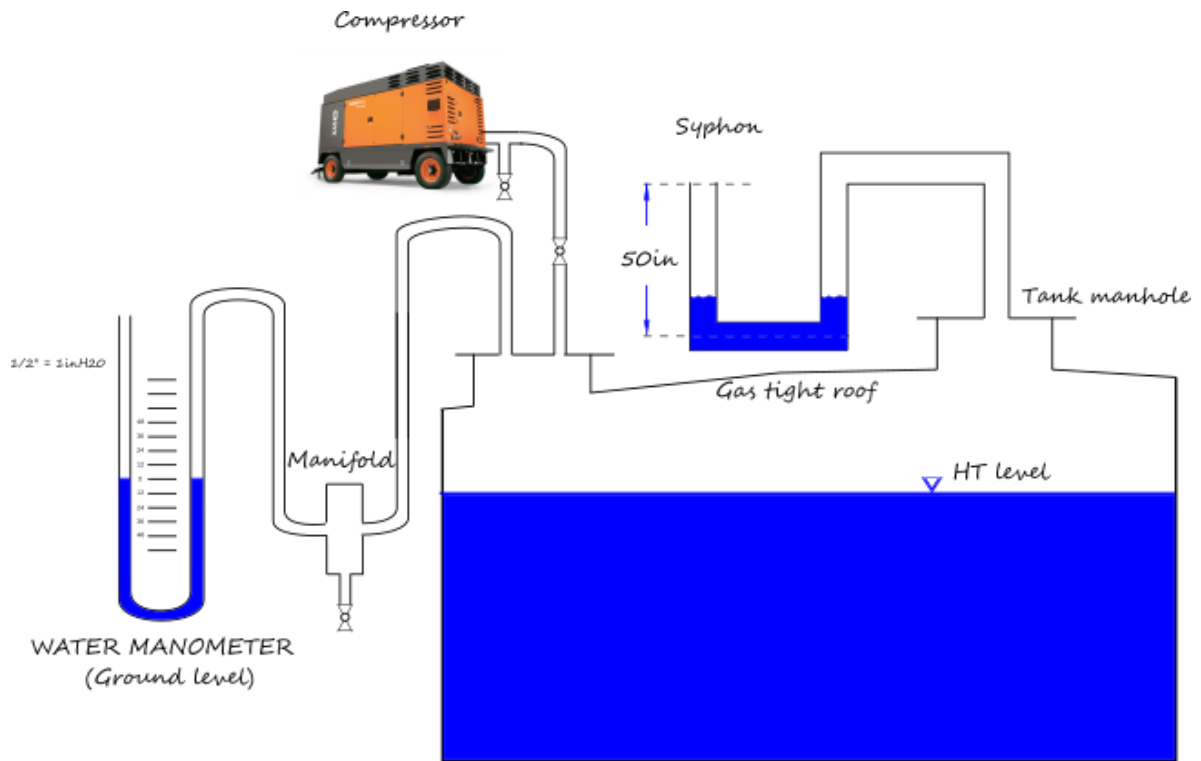
### **STEP BY STEP**

1. Put a syphon above the tank as a safety valve that will stop the pressure build-up in case you forget to close the valve/turn off the compressor.
2. The syphon must have some some 2 or 3 inches longer than the test pressure. For example, if the test pressure is 48inH<sub>2</sub>O, the size of the syphon should be 50inH<sub>2</sub>O.
3. The water manometer should be set up so you can see the difference in inches of water.
4. When everything is ready, and the liquid level of the hydrostatic test is reached, air at 1.25 times the internal design pressure should be introduced above the liquid level during enough time for leak checking around the tank.
5. After checking the condition of the Shell and bolts at ground level, reduce the pressure to design pressure.
6. After pressure stabilization, have the inspector go up the roof and soak the welds with soapy water, checking for leaks. Use soapy water in all the roof welds and check for leaks. Air pressure should be kept during the whole inspection.
7. When the tank is empty, repeat the air pressure test to ensure tightness of the concrete ring bolts.

During the test, extreme caution should be exercised so the sensing line doesn't get bent or strangled..

### **BEWARE OF CONDENSATION IN THE MANOMETER HOSE!**

Condensation in the manometer hose will make you read a lower pressure than shown in the water manometer, which can be dangerous. This usually happens when you connect this hose and let it rest for a long time before actually making the test. Vapors in the product of the tank will condensate in your sensing line. Please purge the hose with an airstream before the test!



Hydropneumatic test diagram (dial manometer not shown)