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Technical Bulletin

Air Testing of FRP Composite Pipe

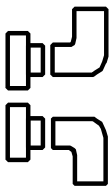
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We strongly recommend **against** the testing of any FRP composite pipe using compressed air. Our position on this air testing is no different from that of any other major manufacturer of FRP composite pipe; including Smith Fiberglass, Ameron Bondstrand, and Fibercast. Attached are excerpts out of each of these company's catalogs confirming their recommendations **against** air testing of FRP composite pipe. We particularly call your attention to the warnings from Smith Fiberglass.

In any event, if the customer insists on an air test, full precautions must be taken for the safety of people and equipment. The test pressure for air testing should not exceed those shown below.

Pipe Diameter	1"	1.5"	2"	3"	4"	6"	8"	10"	12"	14"	16"
PSI	25	25	25	25	25	25	14	9	6	5	4



Smith Fiberglass Products

SMITH FIBERGLASS PRODUCTS RECOMMENDS THAT YOU DO NOT TEST ANY INSTALLATION WITH AIR OR GAS BECAUSE OF THE SAFETY HAZARDS CREATED. The light weight, flexibility, and elasticity of fiberglass pipe create different conditions than are present with steel pipe. **If a failure should occur while testing fiberglass pipe with air or gas, the system would be subject to considerable whipping and other shock-induced conditions due to the sudden release of stored energy. The violent energy release can cause severe personal injury or death to personnel in the area and can also cause property damage to the pipe or other property.**

SMITH FIBERGLASS PRODUCTS SHALL NOT BE LIABLE UNDER ANY WARRANTY, CONTRACT, OR IN TORT, FOR ANY RESULTING INJURY TO PERSONNEL, OR DAMAGE TO EQUIPMENT, PIPE OR OTHER PERSONAL PROPERTY FOR FAILURE TO FOLLOW THE PROCEDURES AND COMPLY WITH THE PRECAUTIONS SET FORTH.

If a line is tested with air or gas, Smith Fiberglass Products will not be responsible for any resulting injury to personnel or damage to property, including the pipe. If there is no alternative to testing with air or gas, Smith Fiberglass Products will recommend test procedures and precautions to minimize possible hazards, but will not bear responsibility for damage or injury under any circumstances.

Such testing is done entirely at the risk of those involved.

Fibercast

Hydrostatic Testing

Wherever possible, FIBERCAST piping systems should be hydrostatically tested prior to being put into service. Care should be taken when testing, as in actual installation, to avoid water hammer.

Testing with air is not recommended!

All anchors, guides and supports must be in place prior to testing the line. To hydrostatically test the line, observe the following:

Water is usually introduced into the system through a one-inch diameter or smaller pipe. Provision for bleeding air from the system should be made. Water should be introduced at the lowest point in the system and the air bled off through a partially open valve or loose flange at the highest point. Slowly close the valve, and bring the system gradually up to the desired pressure.

Test pressure should not be more than 1-1/2 times the working pressure of the piping system, and never exceed 1-1/2 times the rated operating pressure of the lowest rated component in the system.

Ameron

5.0 Testing

Pipe and fittings shall be tested hydrostatically to 1-1/2 times the operating pressure for a period of four hours prior to placement of sand backfill described in Section 4.3.3. Air or vapor at all high points in the system must be replaced by the test fluid before testing. After four hours at test pressure and with the pressure still applied, all pipe, fittings and joints shall be visually inspected for indications of weeping or leaking. Any weeping or leaking condition discovered shall be repaired in accordance with Section 6.0.