CertainTeed

Technical Bulletin

PLAINTIFF'S EXHIBIT

CT-355

July 9, 1974

TO: DISTRICT MANAGERS
TERRITORY MANAGERS
FIELD SERVICE MANAGERS
CUSTOMER SERVICE MANAGERS
PRODUCT MANAGERS
ADMINISTRATIVE ASSISTANTS
QUALITY CONTROL MANAGERS
VF SALES & MARKETING PERSONNEL

FM: E. J. LAWLESS EJL

RE: Low Pressure Air Testing for Sewer Lines

Low pressure air testing of sewer pipe lines is rapidly becoming more prevalent. Unfortunately, it could pose a problem if we are not alert to its possible consequence.

Low pressure air testing (as outlined in our Sewer Pipe Installation Guide) is an excellent method of quickly and economically determining whether or not the pipe has been properly assembled. It quickly tells the contractor that the line is satisfactory without the expense of having to fill the pipe with water (sometimes water is not available).

Unfortunately, however, if the line fails to pass the air test, it does not tell him whether or not the sewer line is within the permissible water leakage as guaranteed by the manufacturer. The reason is quite simple--there is no correlation between the amount of water a line will leak and the rate at which air will be lost. A correlation cannot be established either mathematically or by actual test. There are many reasons for this, but one very clear example would be the presence of a small piece of dirt between the gasket and the pipe end. While our instructions are very specific that the gaskets and the pipe ends should be cleaned and properly lubricated, it can and does happen that some dirt will remain. When an air pressure test is used, the air will readily escape around the dirt and the line will fall below the minimum pressure. However, if a hydro test is conducted, the water leaking through the joint can flush out the small piece of dirt and the line will seal and fall well within the permissible water leakage. In short, a line can fail an air test but pass a water test. It therefore becomes clear an air test cannot be used to determine if a line falls within the permissible water leakage guaranteed by the manufacturer.

In light of the above, we must now carefully scrutinize those specifications which call for an air test and be certain that the specifications include an alternate of a water test and that a permissible rate of water leakage is spelled out in the specifications.. In those cases where an engineer specifies only an air test or an alternate of a water test "upon the approval of the engineer" (he may not give his approval--it has happened), the specification should be called to the attention of the District Manager who will then take appropriate action (through his own or headquarter's personnel) to have this specification changed so that it is acceptable.

cc: T. A. Dougherty VF P&PG
R. S. Hartman VF P&PG