

**technical bulletin**

September 10, 1974

TO: VF P&PG MARKETING & SALES PERSONNEL
DISTRICT MANAGERS
TERRITORY MANAGERS
ADMINISTRATIVE ASSISTANTS
A-C PRODUCT MANAGERS
A-C FIELD SERVICE MANAGERS
SALES ENGINEERS

FM: T. A. SWITALSKI

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RE: FLEXURAL STRENGTH OF ASBESTOS-CEMENT SEWER PIPE

Our competition has for many years been selling A-C sewer pipe in 10 ft. lengths. Occasionally, we still encounter claims that our 13 ft. lengths of A-C sewer pipe are more likely to result in flexural failures. No flexural failures have occurred when our pipe was installed in accordance with our installation instructions. This bulletin is being issued to show some of the merits of 13 ft. lengths vs. 10 ft. lengths of A-C sewer pipe.

Flexural strength of pipe is not only a function of the pipe's diameter and wall thickness, it is also dependent upon the quantity and quality of the fibrous re-enforcement.

The flexural strength requirements for A-C sewer pipe are specified in ASTM C 428-73d. It specifies that an 8 inch Class 2400 sewer pipe of 13 ft. length will be able to support at least 2250 pounds (third point load on a 12 ft. span) and that a 10 ft. length will be able to support at least 3000 pounds (third point load on a 9 ft. span). In effect, the same pipe or one of equal flexural strength will support 75 percent of the load on a 12 ft. span that it will on a 9 ft. span. The previous ASTM 428-67 had been based on a 12 ft. span supporting 133 percent that of a 9 ft. span, thereby requiring a 13 ft. pipe to have a unit strength of 75 percent more than that of a 10 ft. pipe. Hence, the 13 ft. pipe length by the previous ASTM had considerably higher strength than was necessary.

The flexural requirement for 13 ft. pipe of 2250 pound minimum is adequate for pipe that is properly bedded. With bell holes dug out in the trench bottom so as to allow the pipe to rest evenly on its barrel along the flat trench bottom, or with pipe laid on earth mounds and then packed in tightly between the pipe bottom and the trench bottom to give the pipe adequate support, the pipe made according to ASTM C 428-73d will not break in flexure.

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