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## INSTALLATION OF A CONCRETE-ENCLOSED FIBERGLASS PIPE

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**ABSTRACT:** The unique configuration of the Tensionite® cast-in-place concrete pipe forming structure provides a potentially superior method for using trenchless technology as a means of placing pipelines underground. Such pipelines can be used as municipal pipe used to transport water and wastewater as well as hazardous liquids and petroleum products and natural gas.

The configuration is unique in that it consists of an inner fiberglass pipe enclosed by an eight-sided fiberglass cover that is supported by 8 rectangular steel ribs that are placed upon the inner fiberglass pipe. After the pipe forming structure has been sealed, connected and pushed or pulled into its subterranean position the annular space between the inner pipe and the outer polygonal cover is filled with a cast-in-place hardenable concrete mixture.

This paper will disclose proprietary details as to how the unique double-wall configuration enables placement of drills and soil removal equipment that perform the desired excavation activity as the pipe forming structure advances. This paper will also disclose methods by which the Tensionite® cast-in-place pipe forming structures, having diameters ranging from 8 inches to 156 inches, can be pulled or pushed through excavated tunnels before concrete is placed in the pipe annulus to stiffen and protect the pipe from earthquake and soil motions.

Techniques and equipment that enable the completed pipe to be pressure tested will also be disclosed.