



## Flexible Pipe Manufacturers Admit Mistakes How to Move Forward?



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An educational document from the American Concrete Pipe Association for users and specifiers

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In 2008, manufacturers of flexible pipe introduced two new products that are beginning to appear in markets today. Press releases for the new products, known as triple wall polypropylene pipe (TWPP) and steel ribbed high density pipe (SRHDPE) include the following claims:

*“...an entirely new pipe-wall design ... made from a completely different polymer.”*

*“While some engineers have questioned the service life of HDPE pipe...there is no debate regarding the merits of PP pipe...”*

*“PP is very resistant to stress cracking...”*

*“The new triple-wall PP pipe will have even greater stiffness than the existing product line...”*

*“It’s not only the triple wall, but changing the resin.”*

*“Conventional corrugated polyethylene pipe will creep and may buckle if not given special care at time of installation.”*

*“With [SRHDPE]..., the steel will not creep or buckle.”*

*“...pressure rated resin with predictable performance properties the engineer can depend on for the most demanding drainage solution.”*

Take a minute and reflect on what you just read: new pipe wall design; questioned service life; different polymer; resistant to stress cracking; greater stiffness; new resin; no creep or buckling; predictable performance. These are manufacturers’ own words!

For years, the concrete pipe industry has educated owners and engineers regarding the risks of specifying HDPE pipe. However, the statements above constitute actual acknowledgments by the manufacturers themselves of the critical weaknesses of conventional HDPE pipe!

Fortunately, many in the industry have heeded the concrete pipe industry’s warnings regarding the use of HDPE pipe. As a result, owners and engineers are increasing restrictions in average daily traffic (ADT) count, restricting allowable applications for flexible pipe, limiting applications where combustibility or melt properties could jeopardize the traveling public, requiring more stringent installations, reducing allowable fill heights, and enforcing post-installation inspection testing with laser video and mandrels.

For those that did not heed the warnings, premature failures, excessive early replacement costs, unwanted traffic delays, property damage, personal injury, and unnecessary risks to emergency responders have resulted. Costly litigation has arisen in some cases.



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Now a new warning must be sounded. Both new products, SRHDPE and TWPP, are being promoted in the marketplace with grand claims of superiority. Neither product has an approved design method or installation standard, yet manufacturers are making extensive claims of improved performance over their past products.

New materials should never be specified until there are approved design and installation standards for them. Once this occurs, test installations must be conducted with post-installation laser video testing, and such installations regularly monitored until the product's performance attributes are fully understood.

Creating appropriate specifications for any pipe material is paramount. New products must have materials, design, and installation standards before they are accepted by the engineering community. Only then can trial installations with regular monitoring provide the information necessary to judge these products' long term performance.