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Uni-Bell Incorrect and Misleading Information on PE4710 and ANSI/AWWA C906-15

The Uni-Bell PVC Pipe Association recently published a "Technical Brief" entitled *Four Things to Know Before Specifying Polyethylene (PE) 4710 Pipe* that includes incorrect and misleading information about high performance polyethylene PE4710 resins. We find it curious that an association, whose own name infers limitation of scope, namely to PVC Pipe, would position itself as an expert in other competing plastic materials. We believe this is an attempt to turn public opinion against improved engineering resins through the appearance of objective reporting or editorializing, mainly in response to the most recently approved AWWA Standard C906-15.

As an example, one of the most egregious conclusions made by the PVC Pipe Association relates to the belief that the safety factor for pipe made from PE4710 resins is simply the inverse of its 0.63 design factor. This conclusion diminishes the science behind determination of safety factor in particular and the intellect of the engineering design community overall.

Throughout the nearly 10 years invested in the development of AWWA/ANSI C906-15, data was presented and thoroughly vetted at, and through, the AWWA Standards Committee and its exhaustive public review process. Through this arduous ordeal, including scrutiny by AWWA's Standards Council and Executive Committee, it has been demonstrated time and again that the safety factor relative to every facet of system design is greater than 2.0 for PE4710.

What many in the plastic pipe design community know is the strength of polyethylene, a viscoelastic material, increases as the rate of the applied stress increases. In fact, for a short surge event, the yield strength of polyethylene is far higher than the minimum quick-burst pressure for PE4710 included in AWWA/C906-15. The minimum required quick burst pressure test is only a quality assurance benchmark test used in the manufacture of the pipe, and is not relevant to the performance of the material in occasional surge events. It is a disservice to the engineering profession when an organization obfuscates quality control tests with long-term performance capabilities.

The mission of the Plastics Pipe Institute is to promote plastics as the material of choice for pipe applications. Globally recognized for over half a century as a technical-based association, we carry this mission forward scientifically and with a high sense of principle. We believe trade associations should act with integrity and in accordance with the highest standards of business ethics. Water professionals and utilities should expect nothing less.