

Date: April 10, 2018

To: Valued PPI Members

From: Energy Piping Systems Division – Management Committee

Subject: Proper Specification of HDPE pipe for Oil & Gas applications

The Plastics Pipe Institute (PPI) is the leading trade association representing more than 155 member companies involved in the use of plastic pipe in our nation's infrastructure including: plastic piping system manufacturers, resin producers, and plastic equipment manufacturers. Many of the members produce plastic pipe, composite pipe, fittings, and components used in our nation's natural gas distribution network, and for a wide range of oil & gas gathering applications. Today HDPE, polyamide and advanced spoolable composite piping represent a large portion of the oil & gas gathering market in North America.

The use of HDPE piping in oil and gas applications is not new, but has grown dramatically in recent years mainly due to its' ability to withstand demanding service conditions over a long period of time. That growth has greatly increased the number of end users that may be using HDPE pipe for the first time, or may have limited knowledge about how to specify, inspect, and qualify the HDPE products they use.

When specifying a polyethylene pipe for oil and gas applications it is critical to specify the qualified materials and to ensure that the pipe is sourced from a manufacturer that has a demonstrated capability to produce pipe that meets or exceeds industry standards. Industry standards require that a PE4710 compound be used in the manufacture of the HDPE pipe, and that the PE pipe manufacturer have demonstrated HDB performance, which may include dependent listings in PPI Technical Report TR-4. In addition to the material requirements in ASTM D3350, "Standard Specification for Polyethylene Plastic Pipe and Fitting Materials", HDPE pipe should be manufactured to the requirements of the following industry standards:

- **ASTM F2619, "Standard Specification for High Density Polyethylene (PE) Line Pipe"**
 - and/or
- **API 15LE, "Specification for Polyethylene (PE) Line Pipe"**

Specifying the following recommendations and guidelines will provide the best assurance of obtaining high-quality HDPE pipe for a successful installation with a long service life:

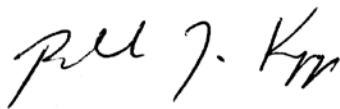
- Manufacturing to the appropriate performance standards ASTM F2619 and API 15LE
- Requiring a PPI PE4710 Compound listing in TR-4 for the pipe manufacturer
- Sufficient markings on the pipe to demonstrate compliance to industry standards, and to provide identification and traceability to a specific lot/batch of raw materials



- A documented quality assurance program for incoming materials and finished product along with a complete record retention system
- Manufacturer should be prepared to provide upon request a Certification of Conformance letter and appropriate quality assurance test data required by the standards

The implications for our industry when poor quality pipe is used in our markets are significant. In order to help promote the use of properly specified and manufactured HDPE pipe for the oil & gas industry, and to assist the user in developing their own specifications, PPI is currently developing a Model Specification for High Density Polyethylene (HDPE) Pipe for Oil & Gas Systems.

Respectfully submitted on behalf of PPI Energy Piping System Division (EPSD) Management Committee by,



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