

PHMSA BRIEFING SHEET - 02/18/2014

NPRM “Periodic Updates of Regulatory References to Technical Standards and Miscellaneous Amendments” RIN 2137-AE85

ASTM D2513 and Rework Concerns

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Advisory Committee Action – December 17, 2013

- On December 17, 2013, the Gas Pipeline Advisory Committee and the Liquid Pipeline Advisory Committee considered the NPRM titled, “Periodic Updates of Regulatory References to Technical Standards and Miscellaneous Amendments”
 - Both committees voted on the miscellaneous changes and all of the standards to be incorporated except section 4.2 of ASTM D2513-09a concerns. The vote was unanimous that the NPRM, excluding rework issues, was technically feasible, reasonable, practicable and cost-effective.

PHMSA Proposal – ASTM D 2513-09a and rework concerns

- Incorporate by reference ASTM D2513-09a, “Standard Specification for Polyethylene (PE) Gas Pressure Pipe, Tubing, and Fittings,” for PE materials, except for section 4.2 which addresses rework material.
 - Section 4.2 states: “Clean rework material of the same commercial designation, generated from the manufacturer’s own pipe and fitting production shall not be used unless the pipe and fitting produced meets all the requirements of this specification. The use of these rework materials shall be governed by the requirements of 4.3 and PPI TN-30/2006. In pipe, rework materials shall be limited to a maximum of 30 % by weight.”
- In this proposal, PHMSA recommended that no rework materials should be allowed for PE pipe.
- PHMSA also invited comments on potential alternatives, including prohibiting rework for pipe 2 inch and below in diameter.
- PHMSA is concerned that there is too much potential for contamination to be introduced in the process.

Synopsis of Public Comments

- Five organizations provided comments and background materials specifically addressing the topic of ASTM D2513-09a – one trade association (American Gas Association) and four industry organizations (Southwest Gas Corporation, Pipeline Plastics, LLC, Chevron Phillips Chemical Company–Performance Pipe, Plastics Pipe Institute (PPI)).

- The four industry organizations were in favor of incorporating ASTM D2513-09a; however they were not supportive of the exclusion of section 4.2 on the use of rework.
- AGA recommended an alternative that no rework material would be allowed for pipe two inches Iron Pipe Size (IPS) and below in diameter and for pipe larger than two inches IPS in diameter industry would follow the requirements in ASTM D2513-09a, section 4.2.
- AGA offered that operators have used 2-inches as their threshold for prohibiting rework; other operators require virgin plastic for all piping.
- AGA also stated that, it is reasonable to consider the risks are greater with smaller diameter, thinner wall pipe, specifically; pipe smaller than 2-inches and mentioned.
- AGA also indicated there could be potential material issues with rework.
- Pipeline Plastics, LLC, Chevron Phillips Chemical Company–Performance Pipe and PPI all support the incorporation of ASTM D2513-09a however; they were not supportive of the exclusion of section 4.2 on the use of rework.
- PPI pointed out that rework materials have not been identified as the cause of fuel failures.
- PPI noted that PPI-30 2006& 2013 provides information on rework/regrind material characteristics and written process control requirements produce PE pipe that meets ASTM-2513-09a.
- PPI also suggested that added costs to PE pipe manufacturers for PE scrap in blow molding versus regrind in pipe production could potentially increase PE pipe manufacturer costs by \$1,000,000 to \$3,000,000 annually.
- Chevron Phillips indicated noted the OTD project and PPI technical note.
- Chevron suggested limiting rework to pipes with wall thickness greater than 0.170 inch, if a restriction is needed. For those that don't know plastic pipe, that puts you somewhere in the middle of an inch and a quarter to inch and a half IPS depending on what your dimension ratio. That is a combination of your diameter versus wall thickness.

Committee Discussion

Highlighted below are questions and responses as discussed by members and one public commenter at the December committee meeting. I have not included a summary of the comments made by the two manufacturers as the major concerns are highlighted above.

Q – A member of the gas committee from the Iowa Utilities Board asked why some operators require virgin plastic materials and others the two-inch measure as stated by AGA?

A1. PHMSA staffer noted that he could not speak for AGA but his understanding is that the use of virgin plastic or the two-inch measure is determined on an operator by operator basis.

A2. A member of the gas committee representing industry reported that National Grid is one of the companies that use only virgin material plastic. The use of the material is decided by their materials engineering manager. She indicated his decision was based on his experience,

examination of pipe tested in their lab and field work. The bottom line is that he is just more comfortable using the virgin material.

A3. A member of the liquid committee representing the Virginia State Corporation stated from his experience companies in Virginia recognize that virgin materials may not be the issue at all instead the concern is more the opportunity for contamination of the pipe material during the manufacturing process. This is an area where there are few standards.

Q. A member of the gas committee representing the public from Hartford Steam Boiler asked implementing the requirement of not allowing any rework (e.g., if the pipe is marked as meeting specifications and the specification permits rework material, how would PHMSA control this?

A1. From the regulatory standpoint, the incorporation by reference of ASTM D2513d will have a caveat stating the exception to exception to section 4.2 (addressing rework). In addition, a documentation system to trace raw material is required under section 4.3. Therefore, manufactures need to keep adequate records as well as operators. The final proof of the type of pipe used lies with the operator.

Comment: Jim Hotinger from Virginia State Corporation Commission (speaking on behalf of himself) stated that he has completed research on the use of rework in the U.S. and in other parts of the world. He is concerned that the standard referenced, PPI TN30, provides no guidance to assure good cleaning, verification processes or testing requirement of the reground material prior to its use to ensure there is no contamination of product. He also stated the use of magnets is not reliable as they do not attract non-ferrous materials, brass, aluminum and others, dust particles. Also, oxidization causes harm to pipe material and may sit for periods of time with the manufacturer and potentially be ground up and therefore introducing oxidized pipe into the process. Jim also stated that rework is not allowed for pipe built to ASHTO standards and that ASTM is currently working on a standard, ASTM WK-37322 and they are looking to eliminate rework.

Conclusion

PHMSA and a panel of experts will provide additional information and answer questions on the topic of rework. Following committee deliberations and public comments, the Chair will call for a motion to vote on whether or not to support the exclusion of section 4.2 of ASTM D2513-09a as proposed in the NPRM: “Periodic Updates of Regulatory References to Technical Standards and Miscellaneous Amendments” published August 16, 2013 (78 FR 49996).