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National Grid 175 E. Old Country Rd. Hicksville, NY 11801 Attn: Parashar Sheth

REF: Smith-Blair Repair clamps for temporary, monitored repair of HDPE and MDPE Pipe.

Smith-Blair, Inc. does not recommend the use of its repair clamps in any application on polyethylene pipe containing natural gas. We acknowledge the increase of HDPE and MDPE pipe in the infrastructure of all utilities and the challenges to repair this type of polyethylene pipe. If a utility wishes to utilize a repair clamp on polyethylene pipe and recognize the risks associated in this application; Smith-Blair will consent to the use of its model 225 repair clamp in a temporary repair on HDPE and MDPE in sizes up to 12" IPS, if the following guidelines are strictly adhered to:

- 1. Installation of stated repair clamp is strictly for temporary purposes and shall not exceed 30 days. A suitable permanent repair of the pipe should be made within 30 days after installation of the repair clamp.
- 2. Wall thickness of HDPE pipe must be no thinner than SDR 13.5 and for MDPE no thinner than SDR 11.5.
- 3. The section of damaged pipe where the clamp is installed must be able to maintain its structural integrity. Per ASTM F1025, damage should not include cracks, jagged punctures, long tears, or deep scratches or gouges which could propagate outside the clamp.
- 4. Installation of clamp must include *spring washers* per installation instruction sheet. (See attachment)
- 5. Working pressure of damaged line must be maintained under half of the clamp's allowable pressure rating, which is 125psi up to 12" IPS size pipe. Thus, the maximum working pressure of said damaged pipe should be no greater than 62.5psi.
- 6. The temporary installation of the clamp shall be shaded from direct sunlight and shall not be buried. If a leak does occur at the clamp, this precaution will allow the gas to dissipate into the atmosphere.
- 7. The assembly should be monitored for leakage until the temporary clamp is removed from service.
- 8. Smith-Blair's repair clamp must be "grounded" while it is installed on the pipe. The utility should use company procedures to mitigate any static electricity that may be on the pipe.





The above guidelines will reduce the possibility of issues arising while the clamp is in service; however, we cannot guarantee the clamp will not leak while in service due to the properties of polyethylene pipe. The knowledge and training of a utility and the experience with the installation of repair clamps and other equipment involved with the emergency, temporary repair of pipe also affects the use of the repair clamp in this application. These guidelines should be used in conjunction with the latest published ASTM F 1025 standard guidelines.

Regards,

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