ALLIANCE FOR pepipe

Engineer's Package 2020

A Comprehensive and Useful Resource for Understanding, Designing, Specifying, Installing and Operating Polyethylene Pipe Systems for Municipal Engineers

Revision 05/2020

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The Alliance for PE Pipe's Insider's Guide to PE Pipe, Model Specifications, Standard Details, and Operator Qualifications

The most comprehensive assembly of PE specific qualifications, specifications, and standard details available for the polyethylene market.

1) **Alliance for PE Pipe's Insider's Guide to PE Pipe** – An explanation of basic PE vocabulary, concepts, benefits, uses, and advantages.
2) **Alliance Model Specifications** – Specifications for PE pipe and fittings including excavation, backfill, and compaction, horizontal directional drilling, and pipe bursting.
3) **Alliance Standard Details** – A selection of PE specific standard details in both PDF and CAD format.
4) **Alliance Contractor Qualifications** – Ensure your PE installation is done properly by only hiring qualified contractors.

The Plastics Pipe Institute's Handbook on Polyethylene Pipe

5) **The Plastics Pipe Institute Handbook of Polyethylene (PE) Pipe** – The definitive source of information for all aspects of polyethylene design and construction. This comprehensive text includes information on material properties, design, installation and applications of polyethylene pipe.

Electrofusion and Repair Guidelines

The Plastics Pipe Institute's Municipal Advisory Board has written extensive guidelines on electrofusion procedure and PE repair options.

6) **MAB Generic Electrofusion Procedure for Field Joining of 12 Inch and Smaller (12" and smaller) Polyethylene (PE) Pipe** – This guide covers proper electrofusion procedures for small diameter (12" and under) pipe and fittings, including installation techniques, training for these techniques and effective evaluation of the electrofusion joint.
7) **MAB Generic Electrofusion Procedure for Field Joining of 14 inch to 30 inch (14" to 30") Polyethylene (PE) Pipe** – This guide covers proper electrofusion procedures for larger diameter (14" to 30") pipe and fittings, including installation techniques, training for these techniques and effective evaluation of the electrofusion joint.
8) **MAB Basic HDPE Repair Options** – This manual provides guidance on how to repair damaged polyethylene pipe. A wide variety of damage scenarios and repair options are offered and clear steps for execution of the various repairs are provided.

Miscellaneous Guidelines and Information

A selection of case studies, guidelines, decision trees, and technical research on the resiliency of PE pipe.

9) **Case Study Data Sheet** – The Alliance will write case studies of your PE projects if you send us this form. A selection of useful case studies for multiple pipe installation types is also provided.
10) **Municipal Contacts** – A list of the PE Alliance's dedicated municipal members and the Plastics Pipe Institute's Municipal Advisory Board members who are happy to share their experiences.
11) **Pressure Rating Chart** – Pressure rating per dimension ratio, and weight per foot of various pipe sizes.
12) **Potable Water Decision Tree** – Determine when to use butt fusion, electrofusion, socket fusion, sidewall fusion or mechanical options for installation of service lines.
13) **Wastewater Decision Tree** – Determine when to use butt fusion, electrofusion, socket fusion, sidewall fusion or mechanical options for installation of service lines.
14) **List of Applicable Standards** – A comprehensive resource that provides a listing of all standards applicable to all facets of PE pipe, manufacturing, testing, fusing, installation and operation.
15) **Thrust Block Design** – The formulas for calculating pull-out force and the dimensions of a thrust block to restrain that force.
16) **Transitions to Traditional Bell and Spigot Pipe** – Protecting transitions from PE to other materials
17) **WL115 – PE 4710 Water Pipe** – A summary of the benefits of pipe made with PE4710 resin

Plastics Pipe Institute Technical Notes

Guidelines for the use of squeeze-off tools and mechanical couplings, as well as information on service tubing and chemical resistance.

18) PPI – TN-36 – General Guidelines for Connecting HDPE Potable Water Pressure Pipes to DI and PVC Piping Systems
19) PPI – TN-38 – Bolt Torque for Polyethylene Flanged Joints
20) PPI – TN-43 – PE Compound Categorization for Potable Water Apllications
21) PPI – TN-44 – Long Term Resistance of AWWA C906 Polyethylene (PE) Pipe to Potable Water Disinfectants
22) PPI – TN-45 – Mechanical Couplings for Joining Polyethylene Pipe
23) PPI – TN-46 – Guidance for Field Hydrostatic Testing of High Density Polyethylene Pressure Pipelines: Owner's Considerations, Planning, Procedures, and Checklists
24) PPI – TN-49 – Recommendations for AWWA C901 Service Tubes in Potable Water Applications
25) PPI – TN-54 – General Guidelines for Squeezing Off Polyethylene Pipe in Water, Oil and Gas Applications
26) PPI – TR-46 – Guidelines for Use of Mini-Horizontal Directional Drilling for Placement of High Density Polyethylene Pipe