Keeping Up with Fusion Standards

If you were fixing a dinner for someone, you'd follow a recipe.

If you were working on a car, hopefully you'd consult an owner's manual.

In that same vein, if you are fusing pipe – you should be using a fusion standard.

Fusion standards are the backbone of the fusion process. A fusion standard is a document with parameters and procedures that have been developed, established, and tested extensively, within the requirements of the group publishing the standard.

The key reason to stay up-to-date on fusion standards is to know that your fusions have the best possible opportunity to succeed.

Polyethylene pipe and the fusion process are forgiving, but unless you are following a standard, how can you be truly sure you've fused correctly?

Having a plan for a project that includes a published standard is a must.

An update on one of the most followed standards – ASTM F2620-11e1. The American Society for Testing and Materials has recently revised this standard to address several areas in the standard that needed further clarification.

These changes are important because they establish firm times for heat soak, heater removal and cooling under pressure. The ASTM F2620-11e1 is backed up with destructive testing outlined in Plastics Pipe Institute (PPI) Technical Report TR-33.

Here are the three major changes to the ASTM F2620-11e1 standard:

1. A minimum heat soak time of 4.5 minutes per inch of wall thickness is required for pipes 14 inches in diameter and larger. This means that after the initial melt bead is observed around the circumference of the pipe, this minimum heat soak time must be completed and then the minimum bead size against the heater must be obtained before removing the heater.
2. A table was added to the standard requiring that a maximum heater removal time be met, depending on the wall thickness of the pipes being fused. This is the time allowed for opening the machine, removing the heater and bringing the pipe ends together.
3. The cool time has been changed diameter to a minimum of 11 minutes per inch of wall thickness. This was done after extensive testing showed that this is the time required for the center of the pipe wall to cool down to 60 to 75 degrees Celsius.

Many other changes were made to the table, including a table for socket fusion that specifies the heating and cooling times for different socket sizes.

The new ASTM F2620-11e1 standard is now available on the ASTM website at astm.org and the testing done to confirm this procedure for PE 4710 pipe material is available at the Plastics Pipe Institute www.plasticpipe.org.

As a reminder, McElroy's new DataLogger® 4 has many of the popular standards built into the software. The new DataLogger 4 supports these standards:

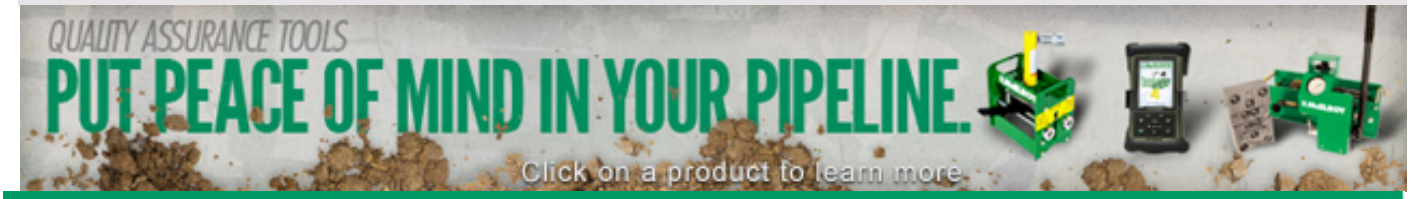
- ASTM F2620-11e1
- ISO 21307:2011-05
- GIS/PL2-3:2006-07
- Profuse
- WIS 4-32-08:2002-04
- DVS 2207-1 PE-HD:2005-09
- DVS 2207-11 PP:2008-08

To learn how to fuse within published standards, courses are held each year through McElroy University. Click here to enroll in classes and learn how to fuse pipe according to published standards.

Sincerely,

Tyler Henning

P.S. – Do you have an interesting job site that you would like to share? McElroy is always looking for fusion job sites where HDPE is being used and fused to solve an infrastructure problem. Contact Tyler Henning, public relations specialist at (918) 831-9286 or by email at thenning@mcelroy.com



PRODUCT SPOTLIGHT

Certified McElroy Rental

There are plenty of rental fusion machine options in the marketplace, but how do you know if your next rental machine is properly maintained and ready to perform?

Choose a better fusion rental experience with Certified McElroy Rentals. Certified McElroy Rental fusion machines are available at participating distributors across the United States and Canada. Here are the advantages of choosing a pipe fusion machine from a Certified McElroy Rental fleet:

- Certified McElroy Rental equipment gets better overall care than other rental machines. Your participating

McElroy distributors adhere to a comprehensive checklist for every rental machine in their fleet.

- Machines in the rental program are constantly maintained to be in the best condition possible – all parts of the machine, from top to bottom, are checked. These checks include electrical, hydraulic, facer, heater, and much more. When a repair is needed, only Genuine McElroy Parts are used.
- Factory-trained inspectors look over the machine after each rental. If repairs are needed on a machine, McElroy factory-trained mechanics are on-hand to perform repairs.
- Certified McElroy Rental distributors are audited to ensure that each fleet meets the high expectations of the program.
- Certified McElroy Rental offers more security and reliability giving you the ability to get the job done.

To locate your next fusion rental machine, visit www.certifiedmcelroy.com to find a participating McElroy distributor near you.

NEWS AND EVENTS

McElroy at EXPOMIN

McElroy attended EXPOMIN in Santiago, Chile on April 9 – 13. The event hosts 60,000 mining professionals and features exhibitions of 1,300 companies.

McElroy exhibited the TracStar® 900, TracStar® 618, DynaMc™ 28 Auto, Pit Bull® 14 and In Field® Tensile Tester at the show to great response. Here's a look at McElroy at EXPOMIN 2012…

Congratulations to Winners of McElroy's 2012 Calendar Giveaway for April

Have you been keeping an eye on your 2012 McElroy Calendar? At the first of April, we offered calendar owners the opportunity to win a free McElroy Coaster.

Congratulations to Chris Brady of Santa Fe Winwater, Rita Daniels of DanWell Companies, and Rick Karle of Ambitech Engineering!

Our next contest is in June, so make sure you circle the date on the calendar and enter to win!

McELROY AROUND THE WORLD

Our pictures this month come from A.H. McElroy Sales and Service in Canada where a TracStar® 900 and MegaMc® PolyHorse™ are working together to fuse 24-inch DR 21 insulated pipe. The temperature you ask? A blistery -35 degrees Celsius (-31 degrees Fahrenheit).

If you have photos from a jobsite, we'd love to see them! Yours may be chosen for the next issue of McElroy Connections. Simply email your photos to Tyler Henning, at thenning@mcelroy.com.

RECENT POSTS

- Colorado Springs is replacing a cast iron pipeline with **#HDPE**. Smart choice! http://ow.ly/aewX9
  Apr 12th
- There's a new DataLogger on the block. Click here for more information on the **#HDPE** datalogging tool: http://ow.ly/9MXe1
  Mar 21st
- Check out this tool that destructively tests fusion joints – the Guided Side Bend Tester. **#HDPE** **#pipefusion** http://ow.ly/9DquT
  Mar 13th
- Want to read about the In Field Tensile Tester in action? Here's how it helped one Florida contractor on a **#HDPE** job: http://ow.ly/9yxOD
  Mar 9th

IMPORTANT LINKS

- Alliance for PE Pipe
- WaterWorld
- Water Tech Online
- North American Society of Trenchless Technology
- Plastics Pipe Institute

YouTube Watch facebook Become A Fan twitter Follow Us

© 2012 McElroy Manufacturing