

Or Equal?

And the Status of Manufacturing

Objectives

- Specification Writing considerations:
 - Best product vs. Best price
 - Buy America vs. Foreign
 - What if there is no Equal
 - Budget vs Reality
 - Translations by reader
- Status of Manufacturing
- Examples of “or Equal” not being an equal but still ending up on jobsites

Specification Writing Considerations

- Best Product vs. Best Price

- Hydrant specs

- You don't get an "or equal" when you want a specified Hydrant
 - All hydrants can be considered an "or Equal" for the specified/Desired Hydrant
 - So we know it can be done.
 - Part of the issue is not all distributors are set up with all manufacturers so they either have to substitute an "or Equal" or figure out if they can sell the desired product.
 - If it is a product you want you may have to add additional wording in the spec to ensure you limit any option for an "or Equal" option.

- Best Bid vs. Lowest Bid

- If you specify a specific product you can accept the best bid vs. lowest bid, if the best bid includes the desired product.

Specification Writing Considerations

- Buy American / AIS vs. “or Equal” Imports
 - If there is an American Version stick to your specs and do not allow substitution
 - Not all foreign parts are made to be equal to USA Manufacturing
- HOWEVER
 - Due to manufacturing issues and the lack of ability to get some raw materials some American Manufacturers can not supply
 - Getting better but there are still some supply issues or massive backlogs

Specification Writing Considerations

- What if there is no “or Equal”
 - Work with multiple distributors or manufacturer to get adequate bids on the desired product
 - Example: Kupferle’s GENESIS
 - One of a Kind Auto-Flusher with Smart technology
 - Sensors used to initiate flushing out in the distribution system based on:
 - Chlorine levels
 - PH
 - Turbidity
 - Pressure
 - Temperature
 - Etc..

Specification Writing Considerations

- Budget Vs. Reality
 - Work with distributors or manufacturers to get most up to date pricing
 - Last 2 years there has been some massive changes in pricing
 - Engineers estimates are necessarily high but due to the current environment their estimates have been too low
 - Some prices are easing into a new norm based on supply and demand

Specification Writing Considerations

- Translations by reader
 - Engineer's Goal
 - Owner's Goal
 - Distributor options
 - Installer/Contractor translation
 - Military orders are written at a level for the soldiers to understand
 - Similarly – what are we doing to help educate contractors product applications

Status of Manufacturing Pressure Pipe and Gravity Sewer

- What is Happening
 - Production
 - Supply
 - Pricing
 - Freight
 - Prediction



Or Equal – Subbing C900 PVC for Ductile

- Written 50 Year Warranty
- Same Size OD
- DR 14 – 305 PSI
- DR 18 – 235 PSI
- DR 25 – 165 PSI
- Lighter Weight
- AVAILABLE



C900 PVC vs. C909 PVCO

- PVCO C909
 - Spec is Buy American – JM only option
 - Attacked By Both DIPRA and Other PVC Manufacturers
 - Supply Issues getting better
 - 3 North American Producers





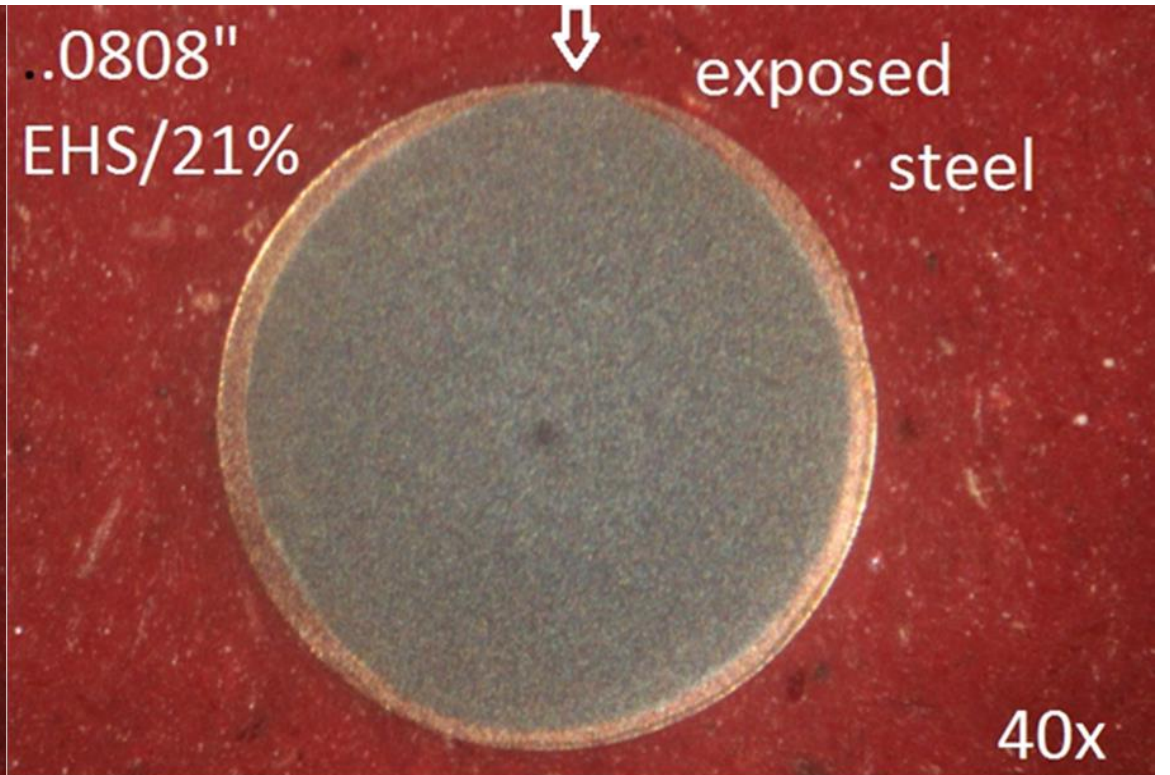
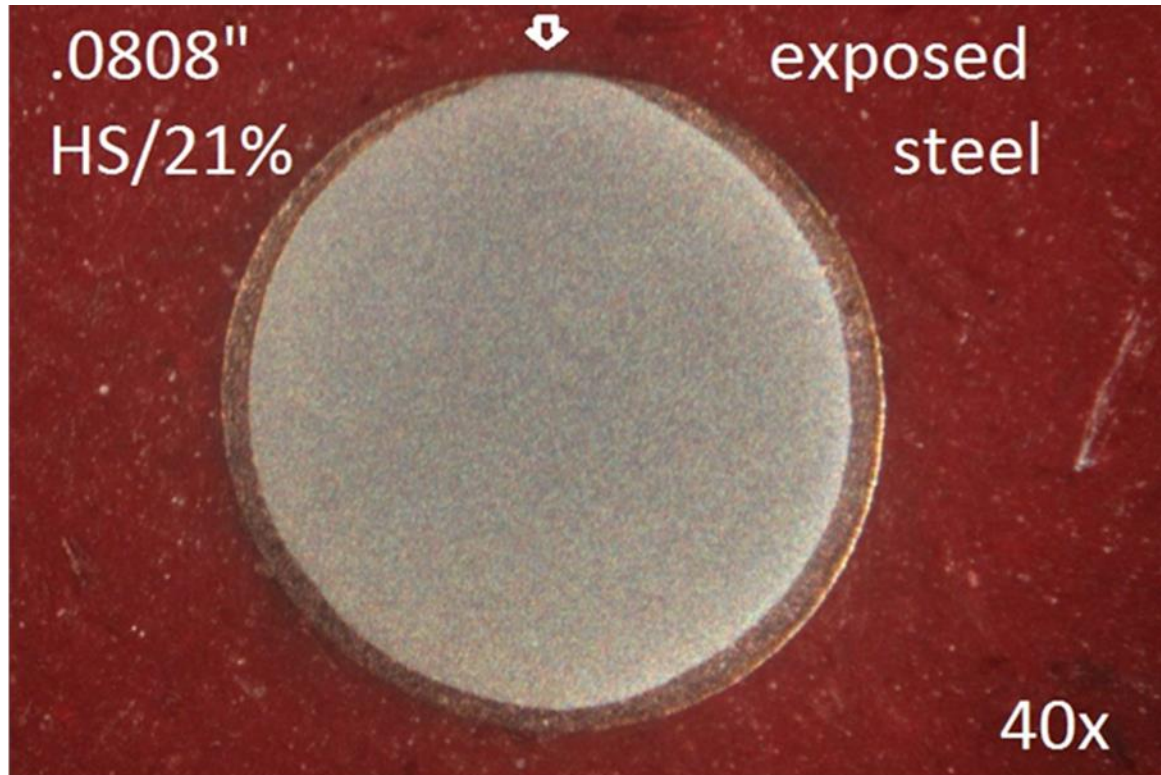
DELIVERING GOOD WATER TO YOU

Tracer Wire

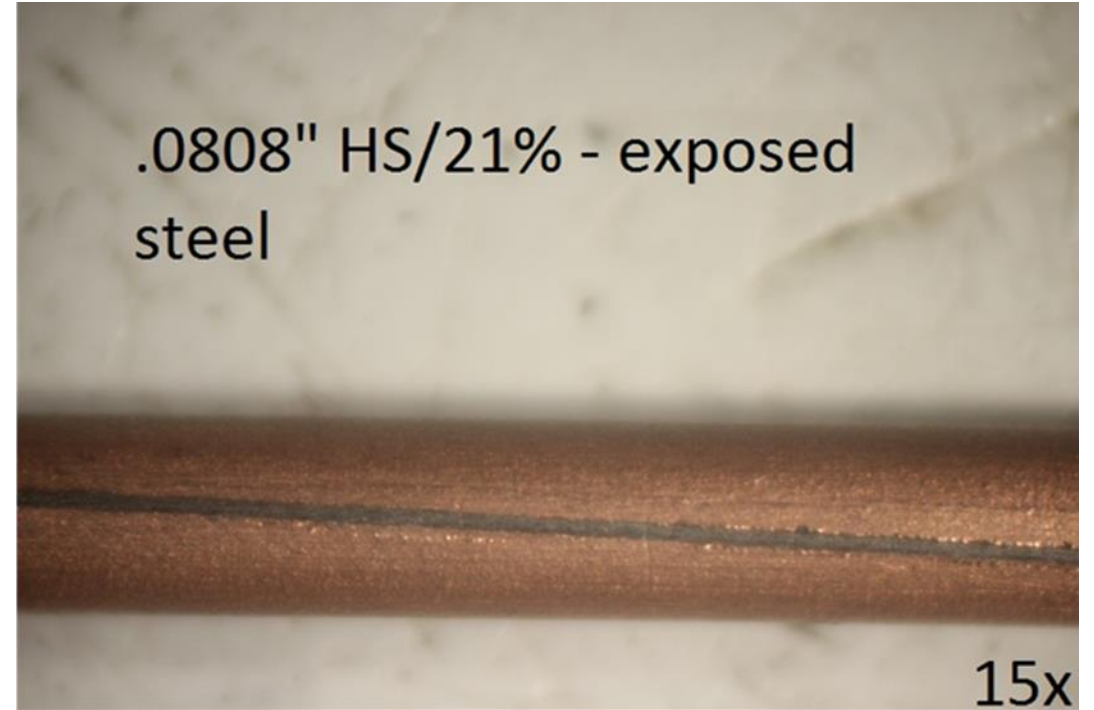
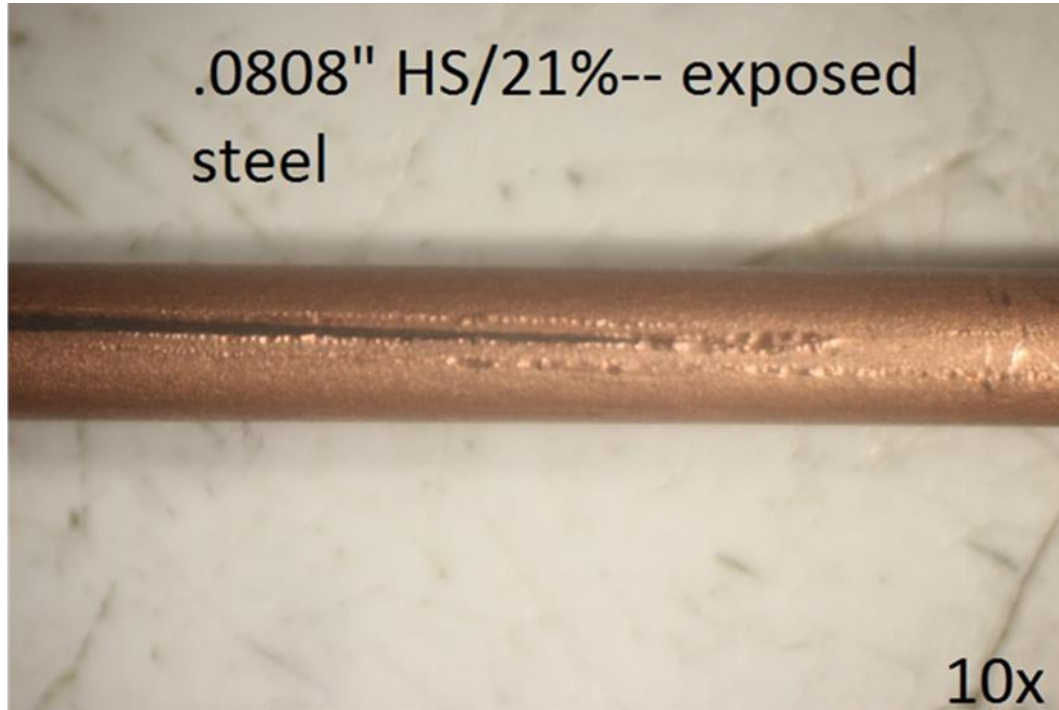
- AIS vs Foreign
- Distributor
 - Gauge
 - Connectors



Poor Cladding



Bad Cladding



Tracer Wire

- Directional drilling – Contractor translation 10 gauge vs. 12 gauge
 - 10 Gauge solid copper 410 – 590 lb breakload depending on type
 - 12 Gauge EHS CCS breakload 1150 lb breakload
- Wrong Wire
- Wrong Connectors
- One chance to get it right
 - Test while installing

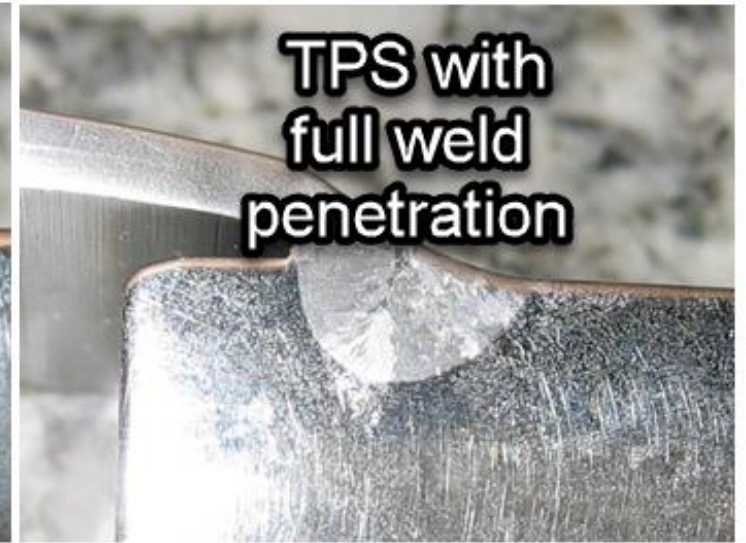
Pipe Repair - Total Piping Solutions

- AIS vs Foreign
- AWWA Standards Board – Pressure Ratings



Pipe Repair

- Welds

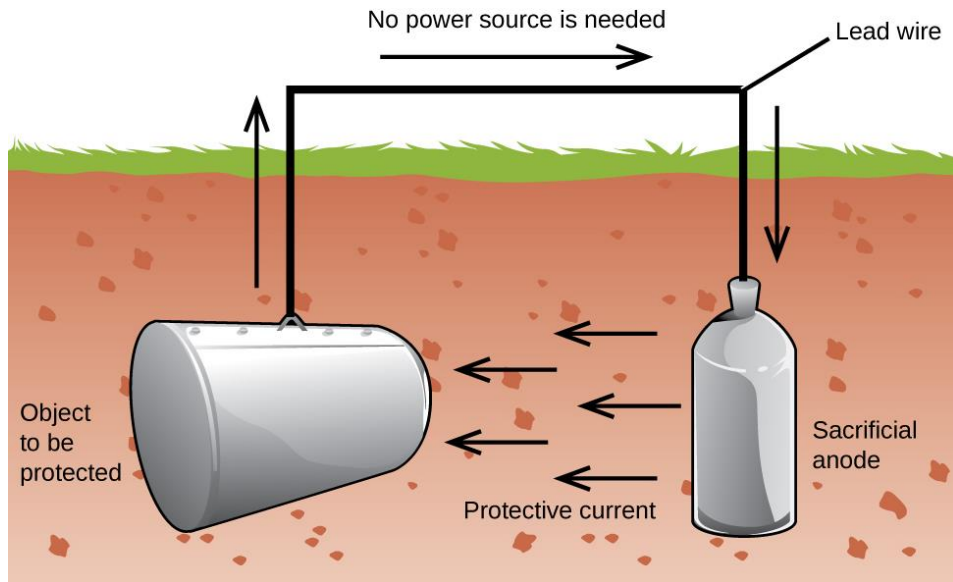


Pipe Repair



Pipe Repair

- Cathodic Protection – Hot Soils



Other type of Or Equals mismatches

Service tubing

Composite Manhole Covers

Auto Flushers

Intelligent Flushers

Valve Exercisers