

Steel Pipe Issues



Pipe Storage & Handling

- Pipe not stored properly at job sites to protect coating.



Pipe Storage & Handling

- Pipe not transported to job sites properly to protect coating from damage.



Pipe Storage & Handling

- Pipe roughly handled due to available lifting equipment.



Construction Inspection

- Some Companies do not use inspectors.
- Some Companies utilize contract inspectors to oversee construction projects. Not always inspecting as thoroughly as required.
- Some Companies utilize their own personnel to work as inspectors. Not always properly trained, equipped, or at each job site.

Issues with Inspectors

- Multiple jobs to inspect on any given day seems to be the rule.
- Lack of training pertaining to Api-1104 and company welding procedures being utilized.
- Not cognizant of the welding qualifications of the welders at the job site.

Inspector Issues

- ▶ No depth gauge to measure mill thickness of coating.
- ▶ Lack of understanding on proper calibration, grounding, and appropriate settings for jeeeping.
- ▶ No Tong Meter, Stop Watch, or Temperature Probe for monitoring welding passes.

Inspector issues

- ▶ Fails to visually inspect weld area for quality of weld, arc burns, and weld splatter onto coated pipe.



Inspector issues

- ▶ Fails to visually inspect quality of applied coating for cathodic protection.
- ▶ Inadequate record keeping.

Welding Issues

- ▶ Failure to verify welder qualifications.
- ▶ Failure to follow company approved welding procedure.
- ▶ Pipe moved to change weld gap tolerance.

Welding Issues

- ▶ Line up clamps not always used.
- ▶ Line up clamps removed prior to 50% root bead



Welding Issues

- ▶ Improper welding rod use.
- ▶ Time between root pass and hot pass not verified.
- ▶ Failure to pre-heat if procedure calls for it
- ▶ Welder & Inspector fail to visually inspect completed weld.

Welding Issues

- ▶ Welding rods not stored properly





Welding Issues

- ▶ If pre-heat is done checking temperature with a temp stick not always done.
- ▶ Welders & Inspectors do not have tong meter to verify voltage and amperage settings.
- ▶ Improper cleaning of root pass.
- ▶ Weld area not shielded from weather conditions.

Welding Issues

- ▶ Not properly reviewing non-destructive testing (x-ray)



Failure to perform a weld in accordance with Operator's Welding Procedure





Coating Issues

- ▶ Jeeping procedures not at job site.
- ▶ Jeeps not calibrated properly
- ▶ Area adjacent to weld not properly prepared for coating procedure.
- ▶ Fittings not properly coated.
- ▶ Coating thickness gauges not being utilized.

Coating Issues

- ▶ Coating not properly applied to piping and fittings



Coating Issues

- ▶ Bubbles in tape coating not detected.
- ▶ Voids in epoxy coatings not detected.



Failure to inspect the pipe coating just prior to lowering into ditch and backfilling.



Construction / Procedural Issues



Failure to install a main with enough clearance from any other underground structure to allow proper maintenance and to protect against damage that might result from proximity to other structures.



2" Plastic Gas Main

Electric Line

Sewer Line



Failure to construct a main in accordance with comprehensive written specifications.



Failure to install an anode in accordance with procedures.



Failure to install a main with at least 24 inches of cover.



Proper Bolting Procedures not being adhered to



Procedure Issues

- ▶ Pipe rough handled into ditch.
- ▶ Inadequate padding of pipe.
- ▶ Improper use of Rock Shields.
- ▶ Improper pigging and purging procedures.

Procedural Issues

- ▶ Failure to ground pipe in gaseous atmospheres.
- ▶ Not following proper torque requirements in installation of bolts.
- ▶ Unqualified personnel making hot taps, welding, purging, etc...
- ▶ Pressure Testing, documentation issues, offsets not documented, faulty gauges.
- ▶ Not properly disposing of asbestos coatings.

Potential Issues

- ▶ Items listed above were only those witnessed by State Inspectors.
- ▶ Lack of oversight in areas of new construction will lead to DIMP issues in the future.
- ▶ Strong consideration should be given to OQ requirements for new construction.

The End

