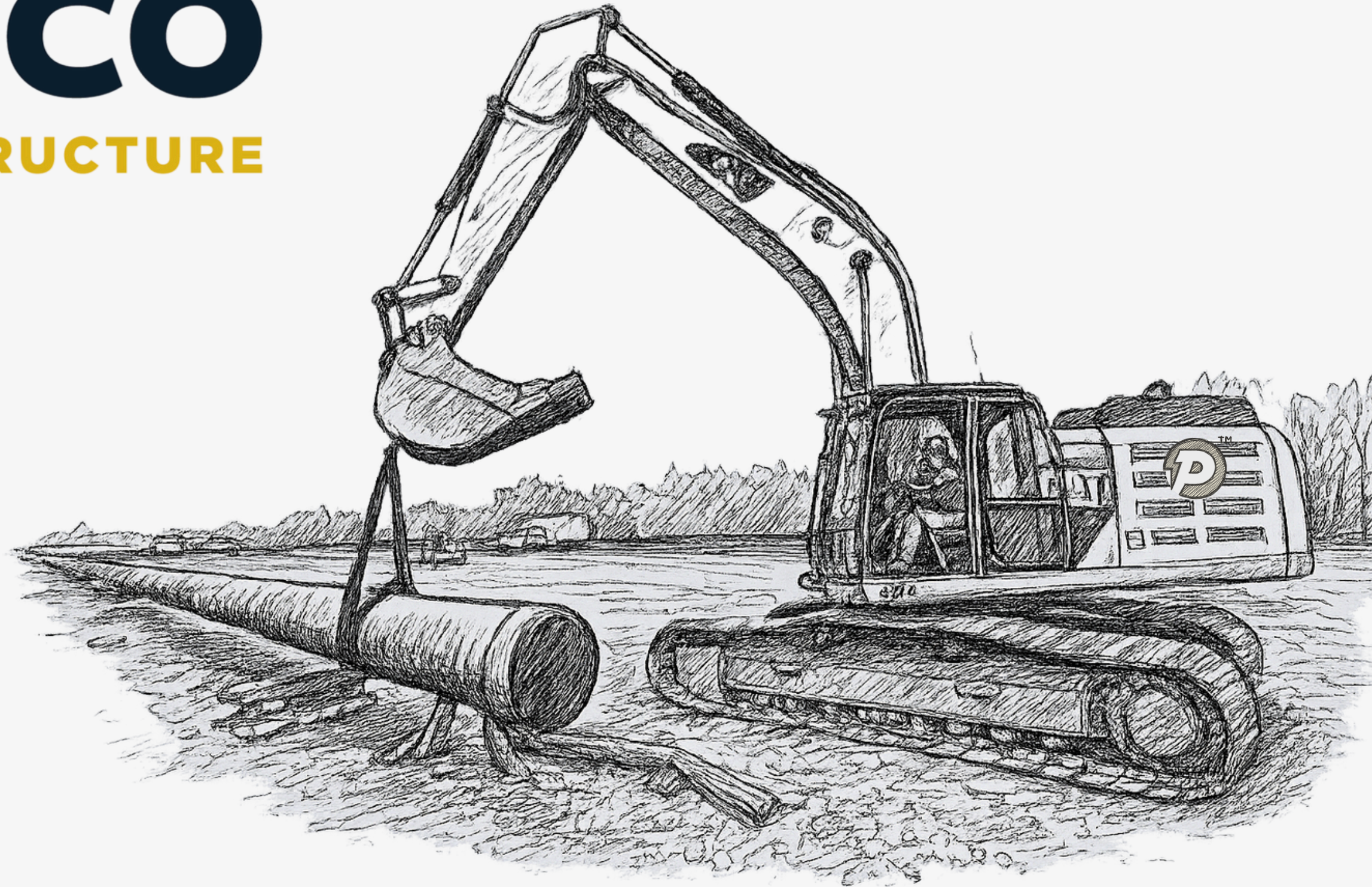




Issues Encountered on Pipeline Construction



Presented by: Adam Nietsche

1981

Year
Founded

5,295+

Pieces of
Equipment

2,300+

Employees

10,000+

Miles of
Pipeline Laid

7M+

Safe Man
Hours 2024

12

Licensed
States

Who is Pumpco?

TM



Certified Minority-Controlled Company

Safety

We prioritize safety because every employee has a life beyond their trade and we want them to live it fully and abundantly.



Environment



We're committed to leaving every site better than we found it—protecting land, water, and wildlife for the communities that follow.





How it Started



How it's Going



What's Changed

Everything.



**LEADING
THE WAY**

1800s



Pre-Regulation Era

- **Gas Milestone (1821): First commercial natural gas well (Fredonia, NY)**
- **Pipeline Use: Local, no federal oversight**
- **Welding/Coating:**
 - Welding had not yet been adopted for pipelines**
 - Pipelines used threaded/wrapped joints, often with cloth and coal tar**
- **Note: No standardized welding or coating codes yet**

1930s



First Federal Oversight

Regulation starts at the transport level, but construction methods (welding/coating) still vary by region.

- **Gas Milestone (1938):** Natural Gas Act regulates interstate gas transport
- **Welding Code (1935):**
- **ASME publishes Boiler and Pressure Vessel Code first welding procedure qualification standards**
- **Coating Note:** Coating methods still rudimentary (coal tar, asphalt, or wax coatings)
- **No codified coating application standards yet**

1968



Birth of Modern Pipeline Safety

- **Pipeline Milestone (1968):** Natural Gas Pipeline Safety Act gives DOT authority
- **Welding Code (1942–1960s):**
 - API 1104 introduced by the American Petroleum Institute — specifically for pipeline welding.
 - Widely adopted in the 1950s and 60s by pipeline contractors and later referenced in federal regs
- **Coating Milestone:**
 - Early standards for fusion bond epoxy (FBE) and polyethylene tape systems begin to appear
 - NACE (now AMPP) develops first formal corrosion protection guidelines

Welding and coating start being treated as critical safety elements in federally regulated construction.

1970s



Here Comes the Government

1970 – OSHA and EPA formed

1974 – PHMSA's predecessor starts overseeing pipeline safety

1974 –FERC assumed FPC's responsibilities in 1977 when the U.S.

Department of Energy was created

Welding Code:

- API 1104 becomes the primary welding code referenced in DOT regulations

Coating Code:

- NACE published — key industry standard on cathodic protection
- Evolution toward liquid epoxy and powder coatings

Regulations shift from "build it tough" to "build it safe, clean, and monitor it."

2000–Present



Integrity & Data-Driven Oversight

2002 – Pipeline Safety Improvement Act

2020+ – Emphasis on cybersecurity, digital mapping, methane tracking

Welding Code:

- **API 1104 and ASME Section IX are continuously updated with procedural testing, automated welding, and welder qualification rules**

Coating Standards:

- **NACE SP0394, SP0102, and others codify inspection, surface prep, and coating QA/QC**
- **Fusion bond epoxy, field-applied liquid coatings, and plural-component systems are regulated more strictly**

Why It Matters



Welding and Coating quality are now regulated by both **industry standards** and **federal law**, enforced through **audits, data logging, and integrity assessments.**

My Opinion



Politics



What Stays the Same:

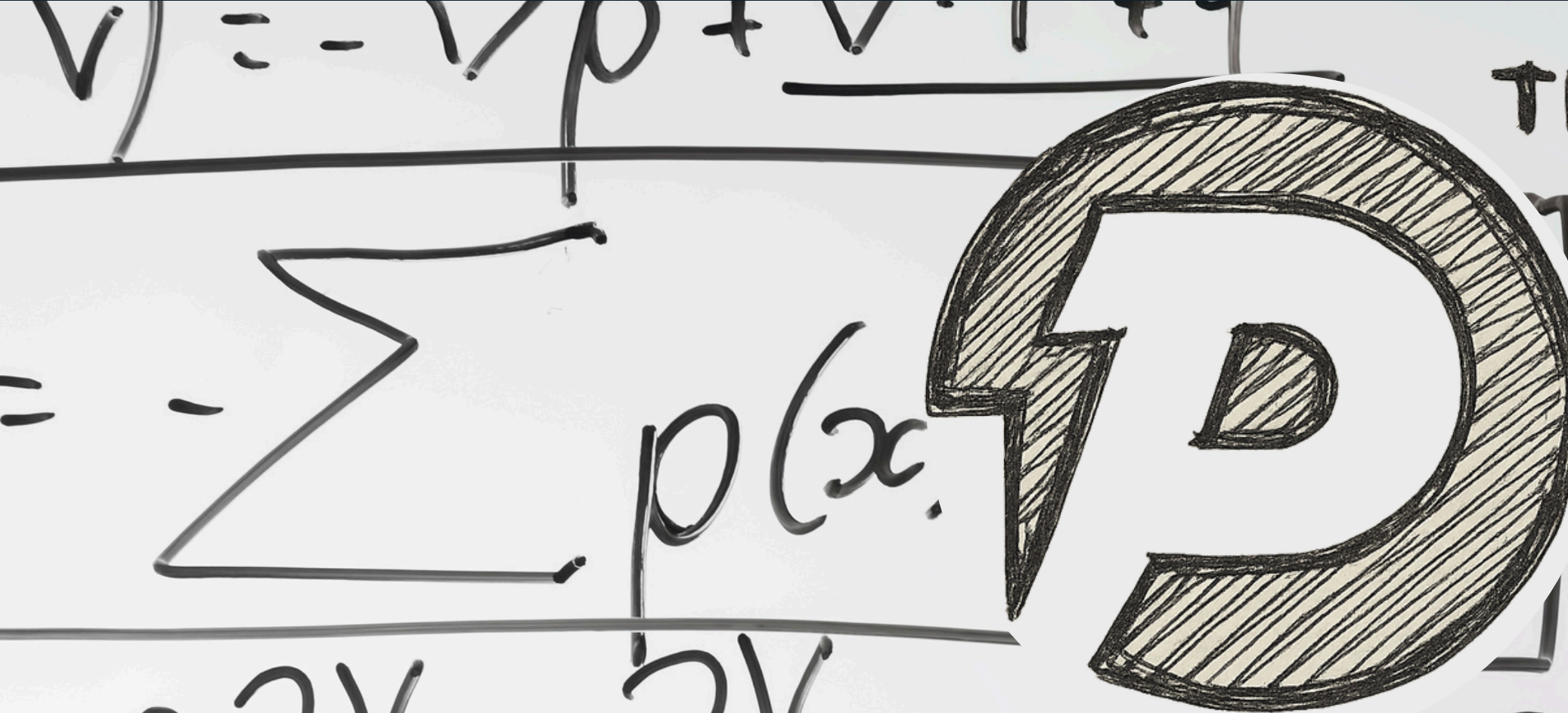
- PHMSA pipeline safety rules
- Welding Code (API 1104, ASME Section IX)
- Coating and corrosion control standards (NACE/AMPP)
- OSHA safety standards (trenching, PPE, confined space)
- Integrity Management Program (IMP) requirements



What Changes with Political Party:

- EPA enforcement of methane emissions standards
- NEPA review scope and speed
- Clean Water Act interpretation (e.g., WOTUS rule)
- OSHA enforcement intensity (fines vs. training emphasis)
- Federal permitting timelines and approval likelihood

Complex



$$r S \frac{\partial V}{\partial S} + \frac{\partial V}{\partial t} - r \cdot V = 0$$

$$= \sum_{i=1}^n \left[\frac{D_i}{m_i N} S_i + C_i^v D_i + \frac{q_i H_i^v}{2} \right] \quad (1)$$

What Works for Us



- **Stay flexible – adapt to new rules quickly**
- **Review PHMSA, EPA, and OSHA updates quarterly**
- **Keep welding, coating, and safety records clean and current**
- **Bring in outside audits to catch issues early**
- **Use legal or compliance partners to guide tough changes**

Training Is a Must



- **Make safety and compliance training part of the routine**
- **Focus on key areas: welding, coating, OSHA, EPA**
- **Ensure certifications are current and properly filed**
- **Tailor training to each job's risk and location**
- **Empower field leads to flag issues early**



7000+
Distinct Regulations, Codes,
and Permitting Steps



01 Stay Close to the Field

02 Bring Solutions not Problems

03 Get Involved

04 Facts not Opinions

05 Be a Partner, Not Just a Vendor

**WE NEED
YOU TO**



LEADING THE WAY



PUMPCO™
ENERGY INFRASTRUCTURE



NAPCA
National Association of Pipe Coating Applicators