API 15S Spoolable Composite Pipeline Systems

SD / ND Commissions
PHMSA TQ
Pipeline Safety Seminar
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DeWitt Burdeaux
Regulatory Affairs
FlexSteel Pipeline Technologies
Why Use Spoolable Pipe?

Advantages
- Economic:
  - Install in 40-80% of the time
  - 35-65% lower installed cost than welded steel line pipe
  - Minimal manpower and equipment requirement
  - No welding, field bending, coating or X-ray costs
- Technical
  - Increased Reliability
  - Improved Safety/Environment
  - Corrosion resistance
  - Smaller right of way

Challenges
- Economic
  - Focus on system & life cycle costs rather than $/foot
- Technical
  - Reliability data base & Design methodology
  - In-service monitoring
- Emotional
  - Change of culture & Lack of standards
  - Minimal tolerance to introduction of new technology
Spoolable Pipe in Regulated Systems

Known Special Permits for Spoolable Pipelines

- **FlexSteel special permits:**
  - TXRRC Gas Services Docket 09813 for use of 25,000 feet 6” FlexSteel to rehabilitate 12” flowline in Texas
  - TXRRC Gas Services Docket 09903 for use of 3” FlexSteel to rehabilitate 6” flowline in Texas

- **Fiberspar special permits:**
  - Docket RSPA–04–18757 for use of 4,200 feet of 4” Fiberspar in New York
  - Docket PHMSA-2010-0063 for use of 8 miles of 4.5” Fiberspar in Alaska
  - Docket PHMSA-2012-0112 for use of 3 miles of 6” Fiberspar in Alaska

- **Smart Pipe special permits:**
  - Docket PHMSA-2012-0112 to insert 1.07 miles 6-inch OD Smart Pipe system into the current 12-inch OD segment of the existing steel gas gathering line

- **Polyflow Thermoflex special permit**
  - TXRRC Gas Services Docket 09995 for use of 5,915 feet 1.25” Thermoflex to rehabilitate 4” flowline in Texas
History of API 15S Document

2006:
API RP 15S 1st Edition, Qualification of Spoolable Reinforced Plastic Line Pipe (Recommended Practice)

2008:
Petition for rulemaking by FiberSpar

2011:
Working Group initiated to rewrite 15S as an API Specification

2016:
API Specification 15S 2nd Edition, Qualification of Spoolable Reinforced Line Pipe
Other Regulatory Movement

2012
AGA: PHMSA R&D Forum urge use of “composite” pipe for transmission

2015
Gas Processors Assoc: Letter to PHMSA encouraging initiation of rulemaking

2015
GTI: Evaluation of Structural Liners for the Rehabilitation of Liquid and Natural Gas Piping Systems (Study commissioned by PHMSA)

2016
Plastic Pipe Inst & FlexSteel: Petition for Rulemaking to PHMSA