

# API 15S Spoolable Composite Pipeline Systems

SD / ND Commissions  
PHMSA TQ  
Pipeline Safety Seminar  
Minot, ND  
April 12, 2016

DeWitt Burdeaux  
Regulatory Affairs  
FlexSteel Pipeline Technologies



EXTREME PERFORMANCE VALUED DURABILITY



# 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 1<sup>st</sup> 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 2<sup>nd</sup> 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