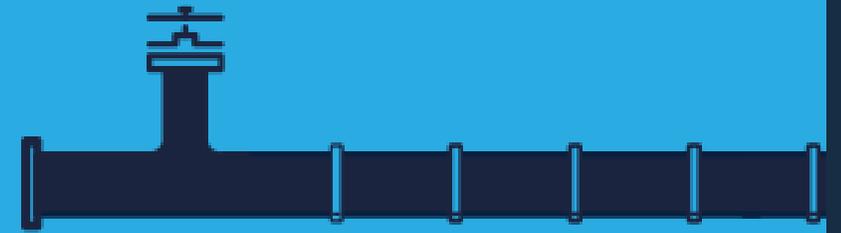


Perspectives on Key Challenges Facing the Liquid Pipeline Industry

Jeff Whitworth
February 19, 2020



Data and Trends

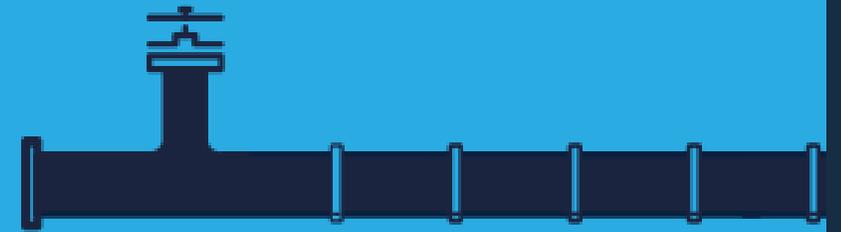


**LIQUIDS
PIPELINES
DELIVER
THEIR
PRODUCTS
SAFELY**

99.999%

OF THE TIME

Data and Trends

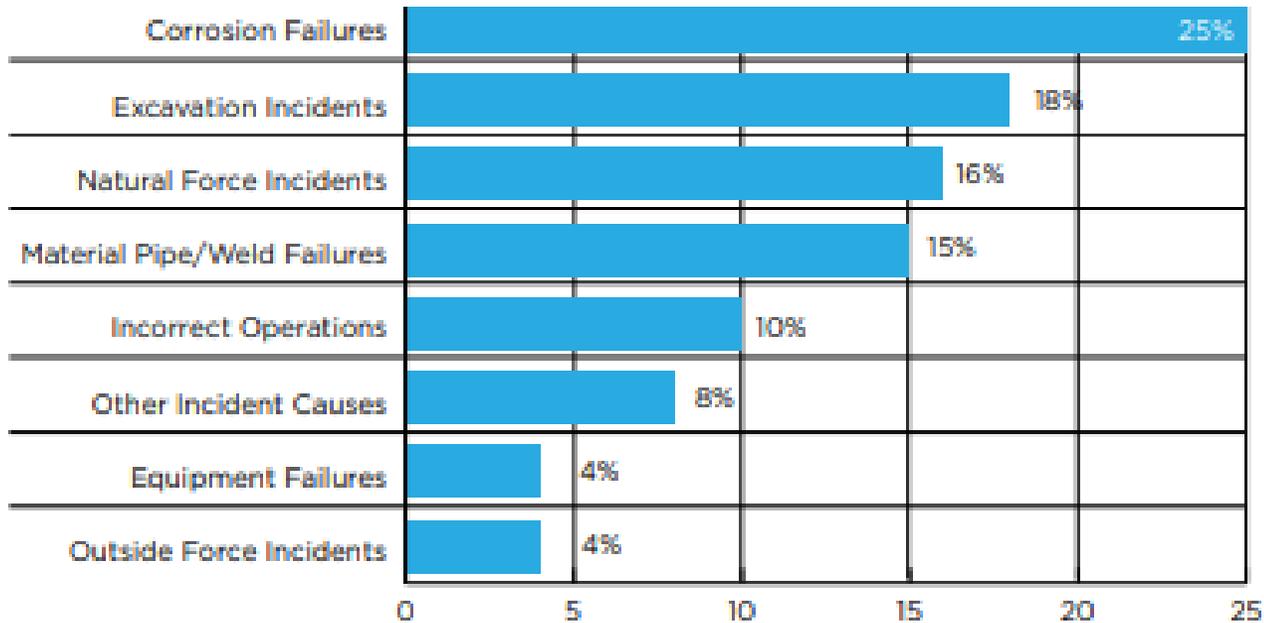


LIQUIDS PIPELINES DELIVER THEIR PRODUCTS SAFELY

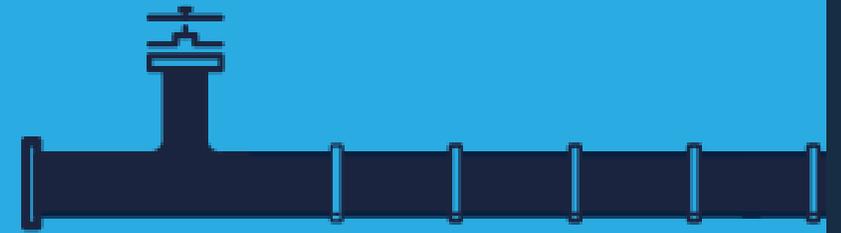
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Data and Trends



**INCIDENTS AFFECTING PEOPLE & ENVIRONMENT
PERCENTAGE OF BBLs RELEASED (2014-2018)**

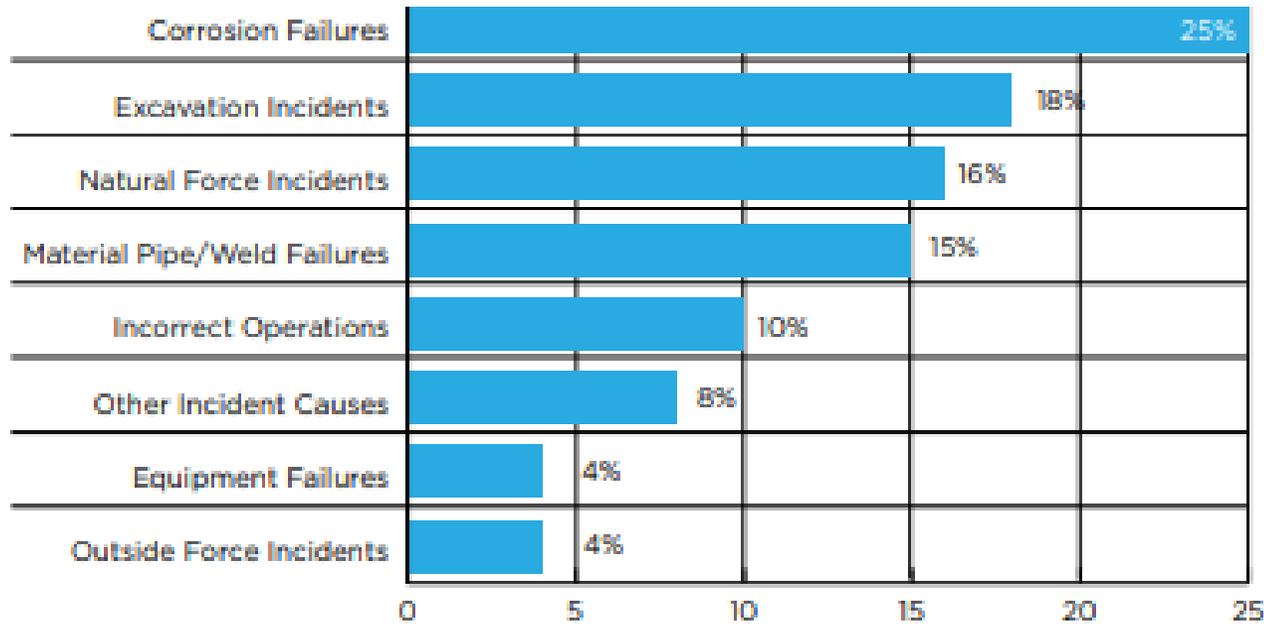


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Progress



INCIDENTS AFFECTING PEOPLE & ENVIRONMENT PERCENTAGE OF BBLs RELEASED (2014-2018)

2019 PHMSA / PRCI CO-FUNDING:

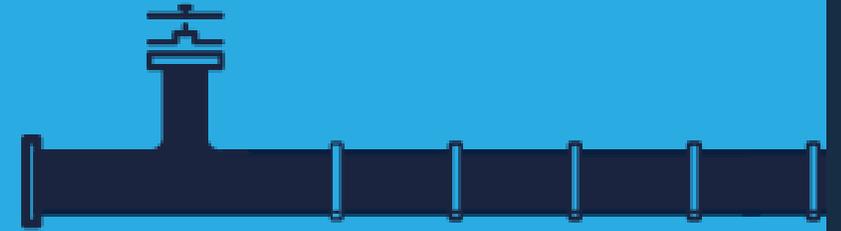
- VALIDATE IN-LINE INSPECTION (ILI) CAPABILITIES TO DETECT/CHARACTERIZE MECHANICAL DAMAGE
- ADVANCE COMPUTED TOMOGRAPHY (CT) FOR PIPELINE INSPECTION
- IMPROVE ILI SIZING ACCURACY
- SYSTEMATIZE 20 YEARS OF MECHANICAL DAMAGE RESEARCH
- IMPROVE DENT/CRACKING ASSESSMENT METHODS
- INCREASE COMPUTATIONAL PIPELINE MONITORING (CPM) PERFORMANCE WITH LIQUID LEAKS
- DEVELOP REMOTE SENSING AND LEAK DETECTION PLATFORMS THAT CAN DEPLOY MULTIPLE SENSOR TYPES

Path Forward

- **CONTINUED FOCUS TOWARDS AN INDUSTRY-BASED GOAL ZERO PROCESS SAFETY MINDSET**
- **STRENGTHENED COLLABORATION BETWEEN INDUSTRY, AGENCIES, AND VENDORS TO ADVANCE NEW TECHNOLOGIES**
- **DATA PLATFORMS THAT ALLOW TRANSPARENT SHARING OF TECHNOLOGY PERFORMANCE, LEARNINGS FROM INCIDENTS, AND BEST PRACTICES**

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Thank You