



Trusted Pipeline Advisor
PIPELINEINTELLIGENCE

Joint Industry Project - Operational Guidance for Avoiding Failures of Spooled Composite Pipelines



Project Participation Fee: \$7,500 - \$10,000
(variable based upon number of contributors)

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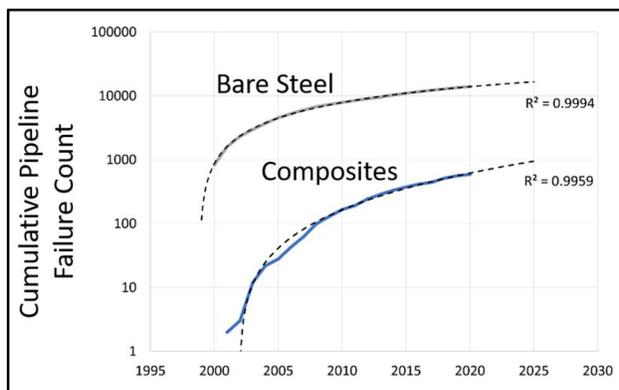
April 15, 2021



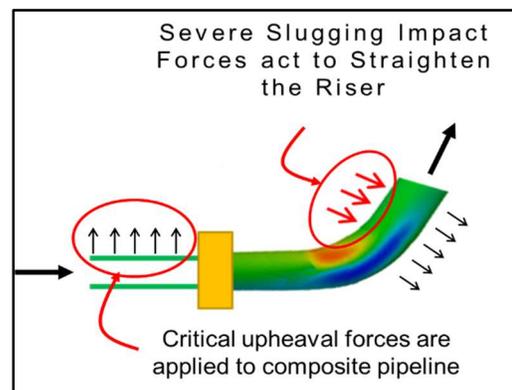


Joint Industry Project - Operational Guidance for Avoiding Failures of Spooled Composite Pipelines

Problem Statement: Detrimental transient fluid flow patterns triggered within multi-phase gathering and water-injection pipeline systems represent a previously unrecognized factor contributing to approximately 85% of historical failure events; production gathering & water injection service.



*Alberta Cumulative Pipeline
Failure Incidents vs Year*



*Terrain-Induced Slugs Trigger
Unbalanced Forces onto the Pipeline*

Project Plan: The Schlumberger / OLGA Slug Tracking module will simulate the transient behaviour for actual pipeline configurations and operating conditions known to contribute to pipeline failures. Detrimental operating conditions will be defined so the operator can perform a reliable risk assessment and establish an integrity management and monitoring strategy designed to avoid future failures.

Project Deliverables: 1) Publication of a suite of operating envelopes defining the severity of terrain-induced slugging vs frequency-of-exposure most likely to cause pipeline failures; for multi-phase production and high-pressure water injection service.

2) Publication of a likelihood-of-failure model for incorporation into corporate risk assessment tools so operators can pin-point problematic pipelines and develop an effective integrity management strategy to avoid failures, including installation of pressure monitoring devices as a tool to characterize detrimental operating conditions and for evaluating the effectiveness of operational changes designed to moderate exposure to harmful conditions.