

INFOSYS PIPELINE INTEGRITY MANAGEMENT



Oil and gas enterprises and pipeline operators face challenging business environment and have to manage significant risks owing to the hazardous nature of fluids they transport through more than 2 million miles of pipelines worldwide across tough terrain and sensitive high consequence areas. In spite of the emphasis on pipeline integrity in these enterprises, over the last 2 decades, more than 10,000 reportable incidents have been recorded in the United States alone resulting in about 2000 injuries and deaths and damage to property worth more than US\$5Billion.

Challenges in building Pipeline Integrity Management capabilities

The organizations building pipeline integrity management capabilities constantly face challenges with reliable record keeping which includes capture, consolidation and retrieval of data across various systems. Also there is inadequate documentation of decisions made and their rationale. There are also challenges around inspection effectiveness that include conducting accurate inspections and capturing, integrating and presenting this data for regulator and organization needs. Finally, developing capabilities around threat identification and risk analysis that includes usage of robust algorithms and mature risk analysis processes to conduct root cause analysis and take timely corrective action have not been easy.

Infosys Pipeline Integrity Management - Overview

Infosys Pipeline Integrity Management is a comprehensive product that helps pipeline operators transcend from preventive to predictive maintenance while controlling costs and conforming to regulations.

Infosys Pipeline Integrity Management brings together best-in-class domain, technology, and product capabilities to facilitate real-time analytics and decision making. It combines Infosys proprietary algorithms and service experience with intelligent dashboards, workflow engines, field-force automation and asset management capabilities to provide an end-to-end modular offering. Its predictive maintenance technology helps pipeline operators control costs while conforming to stringent industry regulations and standards.

Modules

Infosys Pipeline Integrity Management is an integrated product with functional modules which meet the demands of modern day pipeline operators. It has an intuitive and unified visualization dashboard with Geographic Information System (GIS) to view integrated real-

time results. It incorporates analytics and algorithms for calculating business, commercial, operational and structural risk scores which help conduct root cause analysis. It leverages Infosys proprietary algorithms like Pipeline Integrity Business Risk Score (patent

pending). Other modules include business workflow engines integrated with work and asset management systems, field force automation leveraging digitized smart applications that enable real-time communication from field to the control room.



Benefits

Infosys Pipeline Integrity Management takes into consideration the health of the pipeline system and the maturity of the pipeline integrity processes to predict and prevent risks. The product is designed to address challenges of each pipeline operator and helps garner long-term business benefits.

Comprehensive Real-Time Product

brings together domain, technology, and product expertise in real-time.

- An end-to-end offering that helps predict risk and take timely mitigation action delivered leveraging our proprietary algorithms and domain experience
- Collaborates with select partners for data gathering, physical and in-line inspections, simulation considering customer's topography, climate and existing IT infrastructure

Control Costs

by lowering risk of failure, as the organization makes a paradigm shift from preventive to predictive maintenance.

- Reduces lag between problem detection and resolution by eliminating paper based and off-line processes from field.
- Increases operational efficiency by improving economic life of pipeline assets and increasing capacity utilization through reduced Mean Time between Failures.
- Enhances efficiency of on-field technicians and improves workflow management through mobile self-help enablers
- Improves visibility of risks, thus reducing corrosion damage and leaks resulting in reduction in incidents which in turn reduces insurance liabilities.

Conform to Regulations

set by various agencies to ensure safe operation.

- Helps conform to the regulatory guidelines set by agencies like PHMSA (USA), ACER (EU), NEB (Canada) and regional and international bodies.
- Enables organizations draft in-depth, customizable, accurate and timely reports, to increase transparency.
- Ensures safety of people and environment by preventing loss and damage to public property, fatalities and environmental mishaps

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