Abstract Template

Title: How Oil & Gas Companies Can Realize Pipeline Reliability

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Keywords: Oil & Gas, operation reliability, corrosion, pipeline reliability, drones, thermographic inspection

I. Abstract Body (up to 250 words)

Oil & Gas companies take on setting operation reliability strategies that stress how technologies, people and process are put together for sustainability improvements on key performance metrics. By modernizing their operational environment with data-driven, virtualized system, Oil & Gas companies can improve reliability and reduced maintenance costs.

Looking at the pipeline maintenance remain one of the most frequent, expensive and time consuming issues faced in the oil & gas.

As per NACE International global cost of corrosion is estimated to be US$2.5 trillion, which is equivalent to 3.4% of the global GDP (2013) (1). The global oil and gas industries allow as much as 3.6 trillion cubic feet of natural gas to escape into the atmosphere annually (2). By using traditional corrosion & leaks control practices in most cases leads to reactive approaches and poor asset integrity management. The consequences of poor asset integrity management can lead to costly leaks and equipment failures. Adding to; the decreases in the asset integrity and downtime. Other central factors include individual safety or environmental consequences. Through near misses, incidents, forced shutdowns (outages), accidents, etc., several industries have come to realize that lack of corrosion management can be very costly and even putting the reputation at stake.

Through adopting effective corrosion management system that includes technologies, process and people's skills can achieve significant improvements. The value drives toward realizing pipeline reliability go beyond the cost of inspection reductions and minimizes the production loses to includes sustainability improvements on key performance metrics like the safety and environments risk, asset integrity and cost of turnarounds.

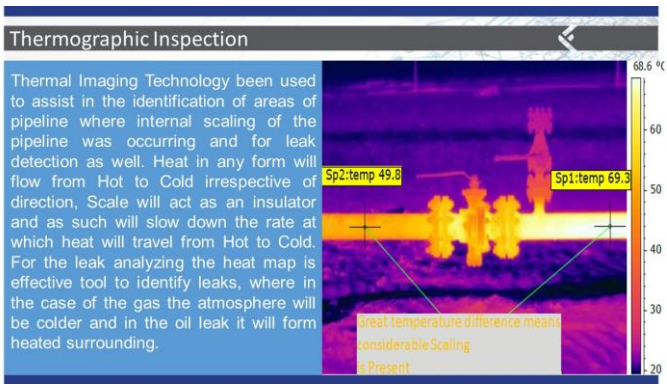
One of the solution offered by FrontierTech is Thermographic Inspection utilizing the power of drones and machine learning. The thermal imaging technology been used to assist in the identification of areas of pipeline where internal scaling of the pipeline was occurring and for leak detection as well. Heat in any form will flow from Hot to Cold irrespective of direction, Scale will act as an insulator and as such will slow down the rate at which heat will travel from Hot to Cold. For the leak analyzing the heat map is effective tool to identify leaks.

Employing smart drones that is self-programmed, unoperated for continues repeated, planned maintenance with full inspection process automation. Connecting the drones to the wireless communication available will unlock the live streaming and online highly efficient image analytics.

Employing the power of the machine learning that utilizes advanced data-science algorithms and multi-parameter analysis to provide a health score for the pipeline.

The machine health score helps in identify a significant change which is indicative of a developing fault, scale and make informed maintenance decisions without the need for maintenance analysis expertise.

II. Image:



III. Reference:

(1) http://impact.nace.org/economic-impact.aspx

(2)https://www.forbes.com/sites/tomzeller/2015/04/21/natural-gas-leaks-a-30-billion-opportunity-and-global-warming-menace/#c88339e16329

Biography:

An accomplished leader in multidiscipline with two successful startups to credit, with Over 10 years of experiences before embarking on my entrepreneurial journey. During my association with multiple companies in various sector (Oil & Gas), Project development & investment, Aviation (Salam Air Project)), I have gained good expertise working in strategies, Project Management, Contract's managements, Service Delivery, Service Management, Infrastructure Operations, ICS System, Wireless Radio communication and Digital Oil field. In terms of education I have received my Master from Coventry university in information technology in 2014 majoring in oil field technology and with thorough study done on Digital Oil Field Communication

IV. Presenting author details



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