Pipeline Diagnostics and Early Leakage Detection

SensoLeak has developed a system for prognostics and diagnostics of evolving failures in mechanical parts.

Technology

The diagnostic system is based on a statistical algorithm that processes the data from the sensors installed on the diagnosed mechanical part. Each time that the algorithm receives the data from the sensors, it calculates the *"system health grade"* (HG), makes a decision on normality of the system and outputs the alerts when needed. These alerts are delivered to the equipment operators in any form according to clients' requirements.

Industries

• Pipelines: Oil, Gas, Water, petrochemicals, plants.
• Rotating equipment: pumps, compressors, heat exchangers, wind/gas turbines, power stations, nuclear.

Markets

Canada, US, Europe, Russia, Central Asia, Africa, Australia, Japan, Latin America, Mexico.

Advantages

The system reports on evolving failures much before the formation of the real one. It is done by monitoring not only the diagnosed part, but also a set of variables that influence it.

• The system is self-adaptive to the changes in the environment and doesn't require any human intervention. It is gained due to adaptive training of the algorithm.
• Low rate of false alarms is gained due to the use of explanatory variables that describe changes in the explained one.
• Ability to acquire and process data from several types of sensors e.g. acoustic, seismic, electromagnetic, mechanical, chemical, thermal, etc.
• A scalable software without a need to install additional sensors or equipment.
• 24/7 online operation with no need for calibration even after unreported changes in the conditions.

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