

Smart Pipeline Industry

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In modern society, pipelines have been the most economical and fastest way to transport energy sources to human life. As demand for pipelines increases with the development of industries, the safety issues on pipeline integrity due to long-term use are also increasing. The advent of the 4th industrial revolution has been a huge opportunity to develop sensor and artificial intelligence (A.I) technologies, and these technologies are being applied to the industry to develop more sustainable pipelines. “Smart Pipeline Industry” is comprehensive activities that manage pipelines with advanced technologies based on smart sensors, A.I. and information technology. By introducing smart technologies to the existing pipelines, it can communicate with pipeline operators to diagnose the pipeline integrity in real time and predict risks. In this presentation, the introduction to smart pipeline will be provided together with novel technologies that have been developed in the Pipeline Engineering Centre (PEC), the University of Calgary and their achievements to shape the future pipelines