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Aspects of Environmental Sustainability in the Operation of Onshore Hydrocarbon Pipelines

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Abstract : The main focus of this conference paper is on the aspects of the environmental sustainability of onshore hydrocarbon pipelines. The latter is notorious for being a source of major environmental contamination and a consumer of vast amounts of natural resources such as water, land, steel, etc. Therefore, the environmentally sustainable operation of pipelines is a concern that requires attention and research. The geographical scope of the paper is confined to onshore hydrocarbon pipelines operated in the Middle East region. The research contains elements of originality as it draws on the author's field experience and practical implementation of environmental and sustainability solutions in a major Middle East-based pipeline organization. The authors describe some of the most common significant environmental aspects of pipeline operations and provide examples of various approaches and technologies that can be successfully utilized to make pipelines more environmentally sustainable. The author concludes that the operation of onshore hydrocarbon pipelines can be made environmentally sustainable. This can be achieved by adopting a systematic framework, focusing limited resources on significant aspects, integrating a circular economy into day-to-day activities, and having strong management support.

Keywords : pipelines, onshore hydrocarbon pipelines, environmental sustainability, significant environmental aspects
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