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Proposal of integrity enhancement of plant by dead leg management system in Zirku Island

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Majority of plant consequence events piping leaks have been due to corrosion associated with dead legs. This Includes control valve bypasses, heat exchanger bypasses and other infrequently uses bypass lines/intermittently operated piping and vent/drains which does not have flushing arrangement. Earlier failure statistics with in ZADCO facilities indicate that majority of leaks in plants are occurring at interconnecting piping systems out of which 70-80% due to dead leg and small bore piping. This situation system to address these concerns and mitigate the associates risks as part of the drive to ensure that all production facilities are available to support long return business requirements. The objective of the study is reviewing the practices at Zirku Dead Legs Management and to discuss gaps/scope for improvement and way forward. Dead Leg is a section of Pipework which contains corrosive hydrocarbon and/water under stagnant condition (either permanently or intermittently) where there is no measureable flow. In Zirku Facilities Corrosion related leaks were recorded and analyzed for mitigation. Dead leg Identification was carried out in plan twice and list prepared for periodical flushing and inspection / elimination of dead leg piping. Practise of Dead Leg Management System: Inspection is being carried as part of DLMS . Dead Leg have been identifies as integrity thread Location along with the related pressure piping system and which subjected to periodical inspection based on the remnant life of piping; Stagnant Flow location like Future Extension , Drain valve / Sample Points High Point Vents , Level bridles / Instrument connections , Valve bypass . Upstream nozzle of PSV, Spare Pump Piping, in which specific ITL's (integrity Threat Locations) was marked for UT/RT. Inspection.

Biography

Ahmed Mohamed Al Dhuhoori- Corrosion Engineer working in ADNOC OFFSHORE COMPANY – Ahmed Holds a bachelor degree in Chemical Engineering (2008) and NACE Certificate in CP, Coating Inspection, Internal Corrosion of Pipeline. Ahmed Works as Field Engineer as Integrity Engineer in the Department of Plant Asset Integrity in Different Fields (Upper Zakum , Zirku Field).

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