

Analisa risiko pipa distribusi solar: studi kasus jalur pipa onshore Balongan Jakarta = risk analysis of solar distribution pipeline study case of onshore pipeline Balongan Jakarta

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Abstrak

ABSTRACT

Jalur pipa solar onshore Balongan ? Jakarta merupakan jalur distribusi solar dari terminal BBM Balongan ke terminal Plumpang. Kondisi jalur pipa memerlukan analisa risiko karena terletak di daerah yang padat penduduk dan umur pipa yang sudah tua. Analisa risiko dilakukan untuk mengetahui tingkat risiko pada setiap segmen pipa dan melakukan inspeksi berdasarkan hasil risiko. Metode yang digunakan dalam penelitian ini adalah metode Muhlbauer dengan pendekatan penilaian parameter Probability of Failure (PoF) dan Consequence of Failure (CoF). Hasil analisa risiko diperoleh 12,38% berada pada kategori medium risk dan 87,62% berada pada kategori low risk. Terdapat 9 langkah inspeksi pemeliharaan untuk mengurangi terjadinya kegagalan pipa diantaranya adalah cleaning pigging, intelligent pigging, memeriksa Transformator Recifier, perbaikan coating, patroli, pengecekan test point, corrosion coupon, dan perbaikan fasilitas. Analisa biaya yang dilakukan menyatakan bahwa biaya saat terjadi kegagalan jauh lebih besar dibandingkan biaya pemeliharaan pipa

ABSTRACT

Balongan ? Jakarta solar onshore pipeline is solar distribution channels from Balongan fuel terminal to Plumpang terminal. During operational period, there was a history of pipe failure which caused damage and cessation of solar distribution process to Jakarta. The condition of pipeline which located at densely populated area and the old age of pipe are also becoming reasons to conduct risk evaluation of Balongan ? Jakarta onshore pipe immediately. Risk analysis was done to investigate level of risk on each pipe segment and to conduct inspection based on risk result. The method used in this research is Muhlbauer method with parameter assessment approach Probability of Failure (PoF) and Consequence of Failure (CoF). The result of risk analysis showed that 12,38% was in medium risk category and 87,62% was in low risk category. There are 9 steps of maintenance inspection to reduce the occurrence of pipe failure that is: cleaning pigging, intelligent pigging, check transformator rectifier, coating improvement, patrol, check test point, corrosion coupon, facilities improvement. Cost analysis stated that current cost suffers more failure compared to pipe maintenance cost.