STUDY RBI (RISK BASED INSPECTION) FLOATING HOSE OF SPM (SINGLE POINT MOORING)

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ABSTRACT

Corrosion happened on the floating hose combination for string 1 and 2 could be affected to the reliability of that hose combination connected from tanker manifold to single point mooring. One of the corrosion is erosion corrosion causes the significant failure. Therefore, it needs an examination with Risk Based Inspection Method (RBI). This method is one of many difference methods that have been used from the inspection management based on risk level operation of the equipment or industrial work units. The Risk Based Inspection uses a combination from two parameters which are the probability of being failure and the consequence of the failure fulfilling the requirement of my project to find out the probability of the failure, risk level as well as the exact examination of the string floating hose. Risk Based Inspection in this study is obtained by using Monte Carlo Simulation. From the simulation results, the probability of failure (PoF) obtained floating hose for string 1 = 4.60%; floating hose for string 2 = 0.56%; Reffering to API RBI 581, we can get into the risk level from difference string 1: medium (3C); sting 2 : medium high (4C). Based on these risk levels, the accurate inspection is ultrasonic straight beam and radiography which is used every 2 years (medium high) and once every 2.5 years (medium).

Keyword : Floating Hose, Monte Carlo, Risk Based Inspection, String.