

## **ABSTRACT**

*PT.XYZ is a company of energy and petrochemicals. Atmospheric Storage Tank is a place to store oil products before oil products are distributed to consumers. In each tank system, there are 9 subsystems: storage tank, grounding cable, automatic tank gauge, water sprinkle, check valve, pressure relief valve, flexible pipe, product drain, and slot dipping device. Risk Based Inspection is a method to determine when the equipment to be inspected based on the risk of failure. RBI method used is Semi Quantitative RBI that is RBI method that combines Quantitative RBI and RBI Qualitative by using API standard 581. In cost approach there is Cost of Unreliability (COUR) method. The purpose of this research is to know remaining life time, interval inspection propose, cost of inspection propose, and money lost in tank system. From the research results can be known estimated remaining life is 63 years. Proposed inspection interval is 4 years. The cost of the inspection interval until the remaining age is Rp1,362,725,448. Based on cost calculation with COUR, the cost caused by system downtime based on downtime is Rp57.513.766.193 and corrective time is Rp15.435.813.588.*

*Keywords: Atmospheric Storage Tank, Cost of Unreliability, Inspection Interval Schedule, Risk Category, Risk Based Inspection, Remaining Life Time.*