

ABSTRACT

PT. XYZ is a company engaged in energy that uses energy and petrochemicals both at home and abroad. Vertical Storage Tank is a place to store products before the product is sent to consumers. Vertical Storage Tanks for Aviation Oil Fuel (BBMP) are different from Storage Tanks for BBM in general. The difference lies in the special facilities and equipment used to meet the requirements and control their quality. The Avtur and Avgas Storage Tanks must be equipped with Floating Suction, Epicot layers, and Draining lines. In the tank storage system, there are 12 subsystems, namely: Vent (Free Vent & Pressure Vacum Valve), Manhole, Hatch Gauge, Floating Suction, Grounding Cable, Water Spray Pipe, Dye Plate, Inlate Pipe & Outlet, Low Point, Splash Plate, Level Indicators, and Foam Pipes. Risk Based Inspection (RBI) is a method that uses risks that can be caused as a basis for conducting inspections. The RBI method used is Semi Quantitative RBI, namely the RBI method between quantitative RBI and Qualitative RBI using the API 581. standard In the calculation of cost estimation can use Multi Attribute Value analysis. The purpose of this study was to determine the estimated age of acceptance, inspection of inspection intervals, estimated cost of inspection, and decision tree modeling on the tank storage system. From the results of this study, it can be seen that the estimated age remaining in the tank is 46 years. The proposed audit interval schedule is 4 years. The evaluation cost for the Evaluation interval schedule is Rp 491.686.272. Based on the calculation of decision tree analysis using Naive Bayes modeling, the results of the failure / damage that occurred in the KK05 damage code were obtained with the amount of 57.69%.

Keyword: Risk Based Inspection, Multi Attribute Value, Atmospheric Storage tank, Remaining Life, Decision Tree, Naive Bayes, Risk Matrix