

ABSTRACT

PT. XYZ is a company engaged in Interlining and Non-woven Thermal Bonds. Pressure vessel is one of the equipment that used at PT.XYZ. A pressure vessel is an equipment that has a temperature and pressure that is different from environmental conditions and at that time of operation the temperature and working pressure of the pressure vessel is adjusted to the fluid being accommodated. The loss due to the current failure of pressure vessel is around \$ 11590.37, therefore companies need to pay attention to the reliability and remaining life of this equipment. This study aims is to measure the remaining life, the level of risk, the estimated interval, and comparison of the cost of the proposed inspection interval and the existing inspection interval. The Risk Based Inspection (RBI) method was used in this study to determine the inspection program and plan based on the risk of failure and failure of an equipment. The RBI method used in this study is the semi-quantitative RBI with the API 581 standard. The results using the RBI method show that the pressure vessel is at the medium risk level, the estimated inspection interval does not exceed the half remaining life pressure vessel which is 6 years and comparison of the cost of proposed inspection intervals and existing inspection results in a difference of Rp 32.342.243,10.

Keyword : Pressure Vessel, Risk Based Inspection, Remaining Life, Risk Level, Inspection Interval.