

## **ABSTRACT**

*PT. Pupuk Kujang is fertilizer producers located in the Industrial Cikampek Area, West Java. In producing the fertilizer PT. Pupuk Kujang using a machine called the Auxiliary Boiler to generate steam from water that are useful for transferring heat to a process. Water is a useful and easy for transferring heat to a process. If the water is boiled into steam at atmospheric will increase by about 1,600 times, producing a force that explosive gunpowder, so the Auxiliary Boiler is equipment that must be managed and maintained well. If the boiler failure will result in plant shut down and of course will affect the production processes and the environment. One attempt to do to prevent failure is to conduct a more targeted inspection activity both in terms of cost effectiveness and use of the company apart from the inspection schedule (2 years). Determination of the appropriate inspection activities will be able to support the production process.*

*Risk-Based Inspection (RBI) is a method of grouping equipment that will result risk risk category can be used as a reference for the company to undertake preventive measures to control the risk categories in order not to move up a level.*

*Qualitative analysis of the results obtained RBI risk category for the Auxiliary Boiler is medium. The concept of life remaining half performed to determine the appropriate inspection interval schedule. With the concept of the half remaining life obtained the inspection interval at half of his remaining life. From the results of this inspection interval is obtained that the boiler tube from MK B Selatan has an average inspection interval is the shortest. By using the proposed inspection schedule, obtain cost savings of Rp 157,856,809.*

*Keywords: Risk-based inspection, RBI, remaining life, the inspection interval*