## **ABSTRACT**

Failure that happened on a machine component can slower production process and also develops loss for the company. The time remained until a component faces failure can be calculated using all kinds of parameter that exists. The time left until the component faces failure is called Remaining Useful Life. By calculating RUL of a component, company can know when the component will fail and prepare the next step to anticipate what the failure will bring. There are many parameters that can be used to calculate RUL, one of the most used is vibration. This parameter then will be used to calculate the RUL by using a chosen calculating technique. From all of the calculating techniques that can be used, the most common technique is Artificial Neural Network (ANN). This ANN technique functions just like neuron in the brain cells in delivering information. The performance result of designing the tool for calculating RUL will be analyzed by using accuracy and confusion matrix that can show where the error is located that had been classified in the model.

**Keyword:** Remaining Useful Life, tool for calculating RUL, Artificial Neural Network technique, vibration parameter