

## ABSTRACT

**Ryan Augusta Mahardhika**, 2018, 50134978. T, "*Failure Analysis of Combustion In Boiler of MV. Meratus Java* ", Thesis of Technical Study Program, Diploma IV Program, Polytechnic of Semarang Sailing Scout, Supervisor I: Achmad Wahyudiono, M.M, M.Mar.E, and Supervisor II: Capt. Rudy Susanto, M.Pd.

Boiler is a closed vessel that can form vapor with pressure greater than 1 atmosphere, by heating boiler water inside it using hot gas gas resulting from combustion of fuel in the combustion chamber. In the process of burning fuel in the burner often experience a disturbance called failure of combustion.

To determine the main cause of failure of burning factor in burner, the authors do the analysis with descriptive qualitatif research method. In this case the authors use the SWOT method as a data analysis technique to analyze what factors cause the burning failure of the boiler and what efforts are made to overcome these factors by identifying strengths (strengths), weaknesses (weaknesses) , opportunities (opportunities), and threats (threats) from the environment systematically to formulate the strategy to be taken.

Based on the results of the research that has been done by the author, it can be concluded that the failure of burning in boiler is not normal caused by two factors, namely 1) not normally burning tool in the boiler, such as the clogging of atomizer and the distance of the electrode is not appropriate, 2) caused by dirty heater, and poor fuel quality. To overcome these factors that can be done is component maintenance, as well as replacement of components if necessary and maintain fuel temperature.

**Keywords:** *Boiler, SWOT, Combustion.*