

## ABSTRACT

**Naufan Budi K** , NIT. 51145354.T, 2018 “*Analysis of the outbreak of fresh water cooler pipe on the main air compressor to the main air compressor in MV. Sinar Sabang*”, Diploma IV program, Technical Study program , Politeknik Ilmu Pelayaran Semarang, Concelour I: H. Rahyono, SP.1, MM, M.Mar and Concelour II: Capt. H. S. Sumardi, SH, MM., M.Mar

Today ships are economical transportation facilities, because the volume of loading of people or goods transported is much larger and the machines used are various, some of which use steam engine propulsion and those that use diesel engines such as those that have been widely used by ships at this time, many of the ships included in the ship's machinery such as auxiliary planes and main driving machines. In addition, ships as a means of sea transportation require timeliness for customers' satisfaction, therefore the operation of the ship should not be disturbed just because of a problem of damage to the air compressor.

Air compressors are auxiliary aircraft that can generate compressed air which should receive intensive care and maintenance, so that the compressor can operate smoothly and withstand for long periods of time. If the compressor is damaged it will result in the delay of wind charging on the wind bottle and will affect the duration of movement of the parent machine, this is very detrimental to the shipping company in general. The factors that cause the rupture of fresh air cooler pipe on the air compressor such as lack of maintenance on cooling water, central cooler, and the treatment of its own cooler.

As the function of the cooler pipe itself is to cool the engine block of compressed air temperature to be compressed to the next press rate as well as to be compressed to the wind bottle. Can be seen from the performance of the compressor when operating whether the cooler works with the maximum through the thermometer on the air line that will lead to the wind bottle. In addition, the cooler pipe used must be maintained so that quality is not quickly damaged, because if one part of the compressor is damaged of course will cause a negative effect and will also result in longer process of movement of the parent machine.

**Keywords :** cooler, pipe, compressor