

ABSTRACT

Narendra Arridho Pradana, 2018, NIT: 50134945. T, “*The Effect of High Temperature on Air Conditioner System Refrigerant Circulation at MT. Sepinggan*”, Diploma IV Study Program, Technical, PIP Semarang, Mentor I: F. Pambudi Widiatmaka, S.T, M.T, M.Mar.E, Mentor II: Okvita Wahyuni, S.ST, MM

Air conditioner is an auxiliary machine at ship that used to cooling all accomodation room and food storage room. There needs to be maintenance for the air conditioner to work to get the required temperature, which consists of the main components and supporting components, including: Compressor, condensor, oil separator, dryer, expansion valve, evaporator, refrigerant duct system and electric control system. That components must be maintained consistenly according with instruction manual book. If there are abnormalities, take action immediately to prevent fatal damage. If there is little damage or unstable with the system, it will affect the cooling process.

In this writing, the author uses the Fishbone method and Fault Tree Analysis by taking the causal factors and the risk of danger to the object under study. The fishbone method can be solved by human, machine, method and environmental factors. While the Fault Tree Analysis method is effective to find the core of a problem that comes from a single point of failure with a top down approach, which begins with the assumption of failure or loss from the top event.

The results obtained in the study are that the factors that cause high temperatures in the air conditioner are operations that are not in accordance with predetermined standards caused by machinists do not know the standards that have been set, and the use of freon that is not in accordance with air conditioners caused by companies that wrongly sent freon supplies to the ship. Thus, this will affect the high temperature produced by the air conditioner. The effort is carried out by maintaining the supporting components of the air conditioner, including compressors, condensers and evaporators.

Keywords: High temperature, circulation, *freon*.