

ABSTRACT

PT XYZ is one of the companies engaged in the business sector of the building materials industry in Indonesia. In the production process at the enterprise used tools as a support for the production process, one of which is a compressor. Based on the damage data owned by PT XYZ, the compressor engine that has a high damage history is the D32 CP8 Compressor Machine. The critical components of the D32 CP 8 Compressor are determined using the risk matrix. The selected critical components of the D32 CP8 Compressor Machine are Screw Motor, Refrigerant Air Cooler, Cylindrical Bearing Oil Cooler. In this study, the author used the Reliability Centered Spares (RCS), Min-Max Stock, ReOrder Point (ROP) methods because this method aims to determine the number of critical component needs for the next 1 year and determine the minimum and maximum number of components in the warehouse. The results of the data collection and processing carried out are obtained the number of critical component needs in the next 1 year based on MTTF data from Screw Motor, Refrigerant Air Cooler, Cylindrical Bearing Oil Cooler. To meet the needs of D32 CP8 Compressor machine spare parts components for 1 year period, 8 screw motor components, 8 refrigerant air cooler components, and 8 cylindrical bearing oil cooler components are needed. To maintain the availability of D32 CP8 Compressor spare parts components in the warehouse, calculations are carried out using the Min-Max and ReOrder Point methods. As for maintaining this availability, the minimum calculation of Screw Motor stock is 3 components and the maximum stock is 8 components while for the ReOrder Point point is when the components are left 4 pieces in the warehouse, for the minimum calculation of refrigerant air cooler stock is 4 components and the maximum stock is 7 components while for the ReOrder Point point is when the components are left 3 pieces in the warehouse, for the calculation of the minimum stock of Cylindrical Bearing Oil Cooler is as many as 2 components and the maximum stock is 6 components while for the ReOrder Point point is when the remaining components are 2 pieces in the warehouse.

Keywords — [*Compressor, Maintenance, Reliability Centeres Spares, ReOrder Point, Min-Max, Spare Parts*]