

ABSTRACT

PT. XYZ is a company that focuses on aircraft design and development, aircraft structure manufacturing, aircraft production, and aircraft services for civil and military starting from light to medium aircraft. One of the products produced at PT. The XYZ is the H225M Helicopter. The manufacture of the H225M helicopter requires the main and supporting materials. The main material serves as the main construction and the supporting material serves as a support for the main material so that it has resistance to age, corrosion, and others. The supporting material has a life span of a certain time and when it has passed its life span it will expire. In the existing condition in 2016-2020, the cost loss caused by expired materials was \$54,566.13. This makes the total cost of inventory increases.

The author solves the problem using the Wagner Whitin Algorithm. This method makes new material requirements planning by considering demand, ordering costs, and holding costs. Calculations using the Wagner Whitin Algorithm method are aimed at obtaining the right number of orders and ordering times so that there is no expired material and minimal total inventory costs.

Keywords— [Material, Expired, Wagner Whitin Algorithm, Inventory]