ABSTRACT

PT. EFG is an aerospace company in Indonesia with main competency in designing and developing aircraft component. In manufacturing company, machine and production have strong relations. Management of machine spare part has important role because it will support maintenance department to maintain facilities for production. To support those operations, machine spare parts need warehouse to store spare part in order to keep the availability of spare part. Because unavailability of spare parts will leads production shutdown.

Spare part warehouse plays important role for keeping spare parts and deliver the right product in right amount of product to the right customer at the right place and right time. However, spare part warehouse at PT. EFG has not been managed well. Based on direct observation shows delay occurs in spare part warehouse. The delay activities come from storing and picking. Delays are caused by spare parts which have not been allocated. Thus, It may spend much time for searching to find the location of spare part.

To solve the problem, began from map warehouse business process using delay for each activity using Value Stream Mapping (VSM) and Process Activity Mapping (PAM) to identify delay occurring in every activities. Next step, classifying spare part based on FSN analysis, design slot of storage by considering the space availability, calculate travel distance of each slot and allocate spare part based on travel distance and the FSN classification. Product placement applies class based storage policy. According to purposed design, future state of VSM shows that the value added time is increasing as much as 20.58% comparing to current state which from 1997.11 seconds become 1551.32 seconds

Keyword: Spare Part Warehouse, Value Stream Mapping, Process Activity Mapping, FSN Analysis, Class based Storage