"DESIGNING DECISION SUPPORT SYSTEMS FOR PROVISIONING AND INVENTORY CONTROL OF B738-800 NG CABIN SEAT SPARE PARTS USING (R, S, S) APPROACH” (Case Study: PT.GMF Aero Asia)

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ABSTRACT

Because of the increasing use of air transport services, every airline tries to develop strategies to ensure passenger's safety and comfort. PT GMF AA as one of the company's MRO (Maintenance, Repair, Overhaul) duty to ensure the aircraft in a ready condition to operate on time. Therefore, it needs sufficient material planning to ensure availability of materials required at the time so it can minimize the occurrence Hold Item List (HIL). Material, as object in research consist of Break Down Part (BDP) of the components of the cabin seats.

Initial inventory parameters were very influential in the success of inventory control. This is supported by calculations using the historical approach experiment (R, s, S) periodic review system to get the minimum total cost and the achievement of the target service level. Four different methods used for determining the maximum parameters of the stock (S) and reorder point (s) that is combined with EOQ backorder with Monte Carlo simulation, a power approximation algorithms, the proposed expert optimum quantity of units of TLK, and provisioning in the company's existing condition. In addition, it also be known that the classification of material types and rate of interests and demands will be a tool designed to facilitate corporate decision
making in determining the best strategy for the procurement of each material.

The results obtained from research of cabin materials belonging to the majority of lumpy and intermittent. Determination of initial inventory parameters with the EOQ with backorders deemed good enough for his ability to achieve target service levels expected. Comparison of the three proposed methods are compared with existing methods of simulation obtained with the combination of simulation EOQ backorders with Monte Carlo is best judged as capable of achieving the target service level expected by the total cost incurred is relatively lower than the existing condition. Designing Decision Support Systems (DSS) is to help companies in making decisions related to planning procurement strategies cabin

**Keywords**: Inventory Control, Decision Support Systems, Periodic Review