

ABSTRACT

CHOOSING FEEDING ASSEMBLY COMPONENTS POLICY ON MOTOR TRACTION 180 Kw ASSEMBLY LINE AT PT PINDAD (PERSERO) BY USING HYBRID METHOD

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PT. PINDAD (Persero) is a company which has business in military industry and service industry. One of their product is motor traction 180 Kwatt, that product is made to order. During August to November 2011 47 units motor traction 180 Kwatt had been produced to fulfill order from PT KAI (Persero).

Motor traction 180Kwatt consist of 109 components and 38 substances. There are many assembly activity, so that, feeding assembly system has important role to control and secure components availability on work stations. Meanwhile, existing production floor doesn't have feeding method. Then, feeding process is not supported by appropriate equipment which use pallet 1x1 meter sized to carry components from warehouse to work stations. Pallet has low carrying capacity because it can't be stacked. The impact is bulk of 528 unit coil on electric work station, while the next work station is often on idle condition. WIP cost for 528 unit bulk coil is Rp745,69 per day.

The research objective is choosing feeding policy for each components class which is classified by Parreto ABC Classification. Then the standard time of operational feeding activities are obtained by using MOST method. The method used in this research is Hybrid method which combine Kitting, Kanban and Line Stocking method. Hybrid method provides more alternative policy to facilitate decision maker in choosing feeding policy for each daily demand product. The decision is taken based on feeding policy which has minimum operation cost.

The result of this research shows that Kanban method is preferable to handle all of component class in feeding activity. While the number equipments needed are 4 unit containers, 1 unit cart and 1 man operator. Then, total equipment cost is Rp 4.414.698, while operating cost is Rp 7.528.629. The policy will turn to Ki/Ka/Ka if daily demand product changes from 0,5 become more than 1.

Keywords: Feeding assembly, Hybrid, Kanban, Kitting, Line Stocking, MOST, Parreto ABC Classification.