

## ABSTRACT

*PT. Jasapower Indonesia (PT. JPI) is a mining company that focuses on the provision of mining services, primarily focusing on the management of cover soil materials located in the town of Tanjung, District of Tabalong, on the province of Southern Kalimantan. On the dumping process, PT. JPI uses the pit crushing conveying (PCC) method. The mechanical equipment in the pcc system, consists of three primary parts, equipment for crushing, conveying and stacking.*

*The dumping process of the overburden materials is done at the outskirts of the mining pit using an Out of Pit Crushing and Coveying (OPCC) equipment, and a bulldozer as the primary working equipment. Other than the bulldozer as a working unit for the advancement of production, other mechanical equipment is needed as a supporting role such as motorgraders, impactors, and compactors. The presence of a bulldozer here is used to push materials that has been disposed by a mobile staking conveyor and continues until the material located in front of the crest has the same elevation, so that afterwards, the disposal area can be passed through by the transport equipments.*

*The problem which is faced on the OPCC disposal area is that the target production of the overburden material that has to be done by the bulldozer unit as much as 1.783 BCM/Hour has not yet been. Problems also occur in the production progress of overburden material stockpiling, where PT. JPI specifies the mechanical device specifications can pass when the carrying capacity of the soil reaches 200 kPa*

*After analysis, the production ability of a single unit of bulldozer right now is as high as 1.198 BCM/Hour and cannot handle the production target, therefore an analysis of the production target for the cover material management so that it can be achieved is needed. The ability of the impactor unit is not able to achieve the needed carrying capacity based on the company's specifications therefore there also needs to be an analysis on the ability of the impactor unit to achieve the passing amount and the carrying capacity of the soil so that it can be passed by the mechanical equipments.*

*There is aslo an attempt to raise the cycle time of the bulldozer, the working efficiency of the bulldozer, and the working speed of the bulldozer in managing the overburden material to achieve the production target of the bulldozer. After the attempt in raising the cycle time, recalibration of the working efficiency, and the raising the working speed of the bulldozer, the production target of the bulldozer is 1.823,25 BCM/Hour, achieving the set production target of 1.783 BCM/Hour. The attempt to achieve the carrying capacity so that the value is up to the set specification of the mechanical equipment on the OPCC disposal area is by determining the amount of passing for the combination of the impactor and compactor units for compaction. After analyzing the combination of compaction, the amount of passing of each compacting device by Impactor unit is eight times with maximum soil bearing capacity is 193.57 kPa and three times Compactor unit with maximum carrying capacity is 200 kPa. Thus, to be able to meet the target value of soil bearing capacity to be traversed by a mechanical device of 200 kPa is a combination of a compacting passing tool eleven times.*