ABSTRACT

This research has reviewed a case study on the KUG & HR room renovation project which has a duration of 91 days and consists of 27 activities. The project has a problem that is the use of construction workers that exceeds the available capacity limit. The capacity of the builders available is 12 people, but on the 12th to the 26th day the implementation of the project requires a builder of 14 to 16 people. In addition, the allocation of construction workers has fluctuated by 50 people. Therefore, to overcome these problems, it is necessary to do resource leveling.

Resource leveling has been done using the burgess method. The burgess method is a heurestic procedure proposed by Burgess and Killebrew. The concept of this method is to consider the sum of the sum of squares generated by determining the start time of each activity. The result of resource leveling shows that the allocation of construction workers has successfully decreased the value of the maximum worker demand from 16 to 12 people so that it can reduce overallocated losses of Rp. 6,480,000. In addition, the number of fluctuations in the workforce also decreased by 40%, from 50 to 30 people. These results indicate that resource leveling using the burgess method has succeeded in minimizing resource fluctuation and resource overallocation in the KUG & SDM room renovation project..

Keywords: critical path method, resource leveling, fluctuations, burgess method, sum of square