## **ABSTRACT**

PT DCM is a company that is running a ducting project, one of the projects is the ducting FO cluster Ruby located in Summarecon Bandung. However, in the project implementation on the Ruby FO ducting, there are shortcomings in project resource planning. Fluctuations in resources and additional workers occur in the implementation, resulting in expenses beyond project planning.

Based on data obtained from the FO cluster Ruby ducting project, resource design will be carried out on projects that have not been implemented yet, namely the FO Beryl cluster ducting project. The method that will be used in this research is resource leveling to do the leveling of labor so there is no fluctuation and addition of labor when the project is running. Before carrying out the leveling process, a calculation using the Critical Path Method (CPM) is used to determine the critical path in the project.

The results of the actual progress of the Ruby Ruby ducting project are known about labor fluctuations and increasing the workforce by 10 people, initially only 13 workers became 23 workers. The amount of labor used after leveling is 13 people which shows the amount of labor used is the same as the initial planning. Leveling up resources also results in a number of workdays for each workforce and minimizes the number of unemployed workers each visit.

Keywords: Resource, Fluctuations, Critical Path Method, Resource Leveling