

ABSTRACT

The success of a project can be measured from two things, namely the benefits and timeliness of project completion. Heavy equipment is an important factor in projects, especially projects with large scale. The purpose of the machine is to make it easier to do the work so that the expected results can be achieved more easily and use shorter time. There are many heavy equipment that are used to help carry out projects such as cranes, excavators, bulldozers, compactors, motor graders, Materials Hoists and other heavy equipment. The purpose of this research is to calculate the Productivity of Tower Crane and Materials Hoist, calculate the costs between tower crane and Materials Hoist. This research was conducted on the removal of the UII Faculty of Law steel roof truss and to observe the movement of the tower crane cycle time carried out at the Project undertaken by PT AHI on Jalan Gejayan, Yogyakarta. Observation for the movement of the tower crane cycle is done for 10 days. After getting the required data from the field then the data is analyzed and processed. From the analysis of the data obtained in the field it was found that the productivity of tower cranes was 38.84 tons / hour of productivity. The time required by tower cranes to lift all steel frames was 0.766 hours and Materials Hoist Productivity was 1.894 tons / hour. From this productivity, the total time of Material Hoist to lift all steel frames is 27.23 hours and for operational costs required to remove all steel roof truss by tower crane, it takes Rp.876,905.64 and costs Rp. 5,368,307.00 for Materials Hoist Based on the analysis that is calculated that the tower crane in the work of lifting steel frames can lift faster and cheaper while the hoist materials tend to be more expensive and longer. This is in line with researchers' expectations because tower cranes can reach horizontal distances that cannot be reached by materials hoists and the capacity of tower cranes is greater than materials hoists.

Keyword : Productivity, Operational cost, Tower Crane , Materials hoist