ABSTRACT

The process of ship building in the Mahakam river area is still using conventional production facilities such as manual cutting plates and profiles. That cause ship building time becomes longer, used extensive labor, and result in poor production quality. This final project aims to analyze the technical and economical development of integrated production facility for increasing shipyard productivity at Mahakam river area of Samarinda. Firstly, shipyard productivity at Mahakam river area Samarinda was analysed. Secondly, the planning of integrated production facility was conducted. Thirdly, the increase of shipyard productivity due to the proposed integrated facility was estimated. Based on the analysis, the existing productivity is about 7.02 Kg/Man Hours with shipbuilding time of 232 days. The increase of productivity can be executed by utilizing an integrated production facility i.e. 1 unit NC plasma cutting and 2 unit hydraulic bending machine of 500 Ton. Utilizing this integrated production facility will increase shipyard productivity to be 10.78 Kg/MH and shipbuilding time will be reduced to 151 days. The total cost of investment is estimated about 55 billion rupiahs that can be returned within 10 years of break even point.

Keyword: Facilities, Productivity, Shipyard, Samarinda