ABSTRACT

The increase in the volume of industrial activity in Indonesia demanding maritime shipping industry in Surabaya region to further improve the service in the form of the new building and ship repair. Based on the shipyard should be able to manage well the production process so as to produce maximum profits. One is the process of inventory and the effective transport of materials. The final project aims to determine the inventory system implemented by PT. Dok and shipping Surabaya and idle time and profile plate material in the warehouse of raw materials by using lean six sigma approach to value stream mapping. From the results of calculations using the sigma values obtained for the calculation of idle time that is necessary to 0.1976 sigma value procurement efforts to increase the material itself. Based on the analysis of the cause of idle time using RCA acquired several factors: low value of sigma use of materials, workmanship unachieved targets on the fabrication process, a process that does not consider the material procurement strategy development process vessels. With the application of lean six sigma approach to value stream mapping process improvement proposals generated inventory PT. Dock and shipping Surabaya include: increasing the value of sigma use of materials, material purchasing strategies appropriate conduct ship-building strategies based on zones, improving cooperation with material suppliers plates and profiles. Making future state mapping to get the proposed improvements to the manufacturing of material procurement planning by considering a development strategy based ship construction zone. Obtained material procurement strategies performed 4 times order.

Keywords: Inventory, idle time, VSM, lean six sigma, RC.