## ABSTRACT

PT. XYZ is the manufacture company established in 1965. One of the products produced is Modul Surya 260 WP. In 2017, Modul Surya 260 WP has 2980 units demand. Based on company data, amount of products that achieved is only 1200 unit. Because PT. XYZ has a stock Modul Surya 260WP of 1483 units, so to meet the number of requests will be made production of Modul Surya 260WP as much as 1497 units. Based on data PT. XYZ, there is still a shortage about 833 units.

This occurred because in the production process found workpiece accumulation work in process (WIP) on some workstations. The accumulation WIP is included in the category of waste inventory

Therefore, the purpose of this study is to identify the root of the problem and design the proposed improvement to reduce the cause of waste inventory in the production process Modul Surya 260 WP with lean manufacturing approach that is kanban system and work regulation.

Based on the design of kanban system, obtained the production control card and kanban post. The result of this research is the decreasing number of WIP on workstation laminating by 56% and in workstation E.L 2 equal to 33%.

Keywords: Lean Manufacturing, Value Stream Mapping, Process Activity Mapping, Waste Inventory, Fishbone Diagram, Kanban