

ABSTRACT

Today technology is no longer a strange thing, every individual can enjoy the existence of ever-growing technology. In addition to individuals, the world of industry can also enjoy the development of technology. The development of the industrial revolution must also have an impact on the development of sorting and packing devices of tea. By exploiting technological developments, corporate competition will continue to increase in the industrial world. However, in the implementation, *PT Perkebunan Nusantara VIII* has used machines in the process of sorting and packing but still requires many operators to involvement in the process. So it can be said that the sorting and packing process is still implemented manually and left behind from the existing industry revolution. The manual work certainly has many limitations on the effectiveness of production and control. One of the limitations of existing systems can result in the failure of production targets to be achieved. The problems found in the sorting workstation including the occurrence of bottlenecks from one machine to another machine. Another problem found in the sorting workstation is the absence of ongoing machine monitoring. This is because of the location in the sorting workstation is crowded. By implementing Design Support Method, by applying the Design Support Method, built a miniplan which is used as a simulating tool in developing the automation system on PTPN VIII Ciater. In the built miniplant there is a machine automation system and monitoring system based on SCADA. The result of this miniplan is a continuous system on the sorting workstation so that the reduced bottleneck is present. In addition to the automatic weighing also reduces the process of re-weighing previously done in packing workstation.

Keywords: Automation System, Human Machine Interface, Design Support method, PTPN VIII Ciater