

ABSTRACT

RANCANGAN ALAT SAVING RACK TROLLEY YANG ERGONOMIS PADA INDUSTRI KEMPLANG ARHAN

**Oleh:
Febriani
1112005**

South Sumatra especially Palembang city, has many food industry, for example Kemplang Arhan Industry. Kemplang Arhan Industry is a small industry whose main product is roasted fish cracker. Although still a small industry, this industry must be requires equipment for production and supplies to help simplify the process of making fish cracker. Employees need order the job more easy, especially in the storage of raw fish cracker that has not has a permanent storage and transport of drying containers increased the workload of employees and the transport time becomes longer. Thus, it is necessary to made a tool that can solve all the problem. Drying container which has been used a circle, while the raw fish cracker are rectangular so the capacity can not be optimally. This research aims to design the ergonomic saving rack trolley with the approach Appropriate Technology. The anthropometric data measure is an extreme individual population data, so by giving tolerance size, obtained size of saving rack trolley is for a length of 50 cm, width 70 cm, height 178 cm, while for the drying container size is or a lenght 44 cm and width 70 cm. Result of the workload of employees based on the pulse and decreased from 118 beats in the category of medium load rate to 95 beats in the light load category. While based on Nordic Body Map questionnaires decreased muscle complaints on ill to very ill category by 11%. The production output has increased from 487 pieces to 519 pieces. Analysis of the investment costs is feasible with the positive NPV of Rp 7.880.000,00 and the payback period of 0,26 years. The uses of saving rack trolley assessed to give effect to an increase of production output and a decrease in workload is known by hypothesis testing that the paired-samples t-test with SPSS. So, the result of this research is the ergonomic saving rack trolley provide increased production output by 32 pieces and decrease the workload of employees by 11%.

Keywords: *Tool Design, Ergonomic, Workload, Production Output, Fish Cracker Industry.*