DESIGN AND BUILD OF DRILL MACHINE WITH 6 SPINDLE FOR THE PROCESS OF SANDAL PERFORATION

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Abstract

Now, small and medium industries in Indonesia that produce sandals at the moment still using simple tools, which one is the perforation process of sandals, that is takes a long time. Alternatives to improve the efficiency of the process is to design drilling machine with six spindle for sandals perforation.

Making sandals perforation drill machine is designed through many stages. Starting from the observation of how good sandals perforation process. Finding the literature related to the perforation process sandals and drill machines. To input data obtained through observation and study of literature in the library or online, then do the planning and calculation of the force will be required and the machine elements to be used. Having obtained the components that will be used, followed by the manufacture of drill machine sandals. Making tools based calculation that has been planned before. Machine testing was conducted to determine the capacity and performance run properly and safely, then do arrangement of report.

Based on calculation, it has been used a motor with a power of 0.5 HP at 2880 rpm rotation that is raised by pulley diameter ratio of 5:4 into 3600 rpm to rotate the spindels. From the experimental results, the average holes sandals of drill machine capacity produced every 5 minutes is 90 holes.

Keywords: EVA Sponge, sandals, drill machine, 6 spindle