

“Design of a Mini Sandblasting Tool for Plate Materials in Pipe and Plate Workshops, Department of Marine Engineering”

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ABSTRACT

Along with the development of the industrial world and technology so that one by one human tasks are starting to be replaced by machines because the capabilities and advantages of machines are superior and efficient than human labor, which definitely requires maximum results in product manufacturing. In the pipe and plate workshop of the Department of Marine Engineering, in connection with this, the dry sandblasting process is very suitable because this process can clean the surface of workpieces with complex sizes, such as rust or dirt such as oil, paint on the workpiece will be easier and shorten the time. , therefore the author makes a sandblasting tool that has a sandblasting tube from LPG tube capacity of 17 kg of sand, serves to remove rust and paint on the surface by utilizing air pressure and sand that is shot directly to the surface using a maximum pressure of 8 Bar, with a blasting hose diameter 25 mm, and 3 meters long, and nozzles. The results of the sandblasting process on a new rusty plate consume 5 kg of sand with an area that can be blasted 22cm x 42cm, taking approximately 8 minutes. Meanwhile, on a medium rusty plate accompanied by paint on a barge majoring in shipping engineering, which can be blasted 25cm x 43cm, it takes about 11 minutes, consuming 7 kg of sand.

Keywords: sandblasting tool, design, and results of sandblasting.