

RANCANG BANGUN SISTEM PENDINGIN PORTABEL SEMI AUTOMATIC UNTUK FASILITAS MESIN PERKAKAS DI BENGKEL PIPA DAN PLAT

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ABSTRACT

In carrying out plate work practicum in the shipbuilding engineering department, Bengkalis State Polytechnic, to be precise, in the pipe and plate workshops, they often use a seated drill machine to do the drilling. In the drilling process, of course, it produces high heat on the drill bit and workpiece due to friction. Because of the high temperature, the use of coolant is necessary. Coolant is a very important component in the machining process. In the machining process, the coolant serves to stabilize the too high temperature of the workpiece and cutting edge. However, in general, seated drilling machines (Leopard LP-16HD) are not equipped with an automatic cooling system, providing coolant is done manually using a bottle, so that work is less practical and produces water spills which can cause floors to become dirty and have a high potential for work accidents. . Therefore, a tool is needed that can spray coolant automatically and accommodate spilled coolant. The tool design method starts with a field survey, tool design, material calculation, tool and material preparation, tool assembly stages and then proceed with tool testing. By preparing the design specifications for this semi-automatic cooling system, the expected target is obtained to achieve an optimal solution.

Keywords: *cooling system, coolant, wiper pump*