## RANCANG BANGUN ALAT SKIR KLEP BERBASIS ARDUINO DENGAN SISTEM KENDALI PID (Studi Kasus Motor Supra 125)

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## ABSTRACT

The valve is an essential component in a vehicle. The valve is on the cylinder head of every vehicle, which is shaped like an umbrella. The valve is divided into two jobs. First, the suction valve functions to open the fuel channel that will enter the combustion chamber. The suction valve will work or open when the piston ends of the exhaust stroke until the piston starts the compression stroke (this is the IN valve's job). The two exhaust valves function to open the exhaust channel, removing the remains of combustion, this exhaust valve works or opens when the piston ends of the working stroke until the piston starts the suction step (this is the job of the EX valve). Skir is the process of scraping a little on the valve seat surface. Processes such as sharpening aim to make the valve seat surface and the valve umbrella tightly back together because they have an even surface. Arduino is an open-source single-board microcontroller. It is designed to facilitate the use of electronics in various fields. The hardware has an Atmel AVR processor, and the software has its own programming language. PID (Proportional Integral Derivative) controller is a controller to determine the precision of a control system with the characteristics of feedback on the system being made. The PID controller is a conventional controller widely used in the industrial world. The PID controller will provide an action to the control based on the amount of error obtained. The control system is the difference between the Set Point and determining kp, ki, and kd. The error in the control system is the difference between the Set Point and the actual value.

Keywords: Valve, Skir, Arduino, PID.