AUTOMATED RECIPROCATING SHARPENING SYSTEM

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ABSTRACT

This project title is "Automated Reciprocating Sharpening System". It is attempts to develop an automatic reciprocating sharpening system for effective sharpening the home knifes. Preset timers are used to control the reciprocating movement of the linear grinder. Double side sharpening mechanism is adopted for effective efficiency. Heat sensors and earth leakage circuit breakers are used to protect the equipment and the user. Knife's edge sharpness level detector should incorporate with the device.

The reason that triggers me to do this project is because my mother is a housewife, so the kitchen knives are very important kitchen appliances for her, and also for every housewife and chef. But a common problem with kitchen knife is often dull because of frequently using. It is very inconvenient for them. Some more sharpening the knife to the specifically sharpness also had the specifically skill, not everyone can do it without any skill. And sometimes you would accidentally cut your finger when you are using the traditional manually knife sharpening method.

This project is successfully working, the aim of the project is almost achieved, and most of the objectives had been meet. Results show that the device is able to produce the reciprocating sharpening movement with control circuit. Infrared detection sensors are used to control the reciprocating movement of the linear sharpener. Double side knife sharpener tool is adopted for the device. Heat sensor and earth leakage circuit breaker is unnecessary. Since only a little bit of heat is generated during the sharpening operation, and earth leakage circuit breaker is already build inside the power supply. It is a pity that the knife's edge sharpness level detector is unable to incorporate with the device. In the fact, it is difficult to identify the sharpness level of the knife's edge. Although this application is unable to achieve, still the device can sharpening the home knifes to required sharpness level.