

***Experimental Study Of The Effect Of Grid Addition On Perforated Burner
And Heat Radiation Reflector 1 Row Fins On The Efficiency
Of Amor Am 01 Gas Stove***

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ABSTRACT

The problem of the fuel and natural gas energy crisis is a conversation in the world, the addition of the population causes the demand for energy needs to increase. On the other hand, the types of gas stoves are very diverse, so there needs to be a study on the thermal efficiency of gas stoves. The addition of 3 mm thickness grid material there are 3 variations, namely variation 1 with a hole diameter of 0.4 cm and 60 holes, a variation of 2 with a hole diameter of 0.6 cm and 50 holes and a variation of 3 with a hole diameter of 0.8 cm and 40 holes coupled with the use of a reflector sheath 1 row fin thickness of 1 mm, is expected to be able to focus the flame and minimize losses. Tool manufacturing mechanisms include the preparation of tools and materials, modification of stove mounts, grid design and reflectors, and testing of tools. The method used in testing is the Water Boiling Test (WBT) method. Parameters in testing are start uptime, total testing time, boiling time, fuel consumption and thermal efficiency. The results showed that the boiling time generated by the 1-row variation grid and 1-row reflector was 18.06 minutes compared to no grid and reflector addition of 20.45 minutes. Fuel consumption increased in the use without reflectors and grids by 19.89 gr compared to the 1st variation grid and 1 row fin reflector by 17.32 gr, while for the highest efficiency resulted grid variation 1 and reflector 1 row fin by 57.73% and the lowest efficiency without the use of grid and reflector of 49.52%.

Kata Kunci: *burner, grid, radiation reflector, power, efficiency*