

Enhancing Performance of Compact Crucible Furnace by Optimizing Crucible Position

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ABSTRACT

The purpose of this research is to improve compact crucible furnace by optimizing crucible pot position. The crucible pot made from steel pipe of 170 mm diameter and 250 mm height. Height of crucible pot support were vary of 20, 40, 60, 80, and 100 mm. furnace performance determined by temperature incerasing rate, aluminium melting rate, and LPG consumption. Temperature change measured by infrared thermometer at 3 location and at aluminium surface. LPG consumption measured by digital scale. A 60 mm height pot support gives optimum performance of compact crucible furnace. It achieve 600 °C within 35 minutes. The average LPG consumption is 1,4 kg in 35 minutes.

Kata Kunci: *Performance, Compact crucible furnace, Pot support*