Pornpat Warinrampai 2006: Master Model for Aluminium Filled Epoxy Resin Mould. Master of Engineering (Industrial Production Technology), Major Field: Industrial Production Technology, Interdisciplinary Graduate Program. Thesis Advisor: Assistant Professor Chatchapol Chungchoo, Ph.D. 144 pages.

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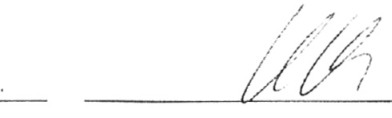
Currently, mould industry in Thailand is facing problem in the production of moulding due to higher cost, long lead time, and the constantly fluctuating cost of material. Consequently, the price of the mould tends to be high, especially for the job which required a small amount, and competition in the market. As a result, the mould and the lead time are the major factors that determined the competitiveness of each supplier. Therefore, the development of Aluminium Filled Epoxy Resin has become one an advantageous alternative in the industry.

The research and development in is first being done on the sample parts which have a low complexity, to find the suitable material or part for making the master model by casting the Aluminium Filled Epoxy Resin and use as "Insert" as for the core and cavity of the mould. Experimental results show that the material/part used as master model has a limitation in removing from the casting mould. For this research; the polypropylene was used to be the master model for Aluminum Filled Epoxy Resin Mould. The results also show almost 100% of surface of the mould got by the casting process is the same smooth as the master model. Some problems and other trouble things are exposed depending on how to prepare the master model step by step. Since the parting lines have to be designed and arranged properly for getting rid of any undercut problems. The way to solve this problem is to use plaster cement to be platen because easy to find, cheap, could be making in short time and could be polishing up the surface and the parting line.

Pornpat Warinrampai.  May / 19 / 2006

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