Thesis Title	A Hybrid Approach to Set-up Critical Parameters of A Plastic Injection Molding Machine
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Candidate	Miss Pronnapa Sanongboon
Supervisor	Dr. Suksan Prombanpong
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Abstract

The purpose of this research is to develop an algorithm as a computer software program to select parameters of an injection molding machine. As a result, the acceptable solution can be obtained faster and trial-error is eliminated. Thus, the production cost will be reduced.

There are sixteen important parameters that must be investigated. They are melt temperature, barrel temperature, metering stroke, cushion, resident time, mold temperature, screw speed, back pressure, switch over, injection speed, injection pressure, holding pressure, holding time, clamping force, demold temperature, cooling time as well. The approach of this research is four steps. First, the above sixteen parameters are initially studied and analyzed. Then, the knowledge from experts is captured. In the third step, heuristic knowledge together with theories and C-MOLD software program is utilized to obtain the algorithm. Finally, the developed software named INJECTMOLD is tested and verified by experts in injection molding factories.

It is proved that INJECTMOLD is generally acceptable by many users. The result generated by INJECTMOLD is widely acceptable by plastic injection engineers in Thai industry.

Keywords : Injection Molding Machine / Parameters / Thermoplastic / Experts