

Thesis Title	Program Development for Investigation of Cooling System Design in Plastic Injection Mold
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Abstract

The design of the cooling system is as important as the design of a mold cavity. The cooling system plays an important role in molding quality and affects operating time. In design of the cooling system, a designer's experience is necessary. Since, the cooling system design is the last step of an injection mold design, a cooling hole or area will be designed and located at restricted available areas. As a result, the heat dissipation from the inner mold may not be good enough. The methodology applied in this research combines both experience from the experts and theories from textbooks such as heat transfer in mold and cooling conditions. The computer program, named COOLECK, is developed to check the efficiency of heat transfer in mold and recommend the trouble-shooting when unsuitable condition occurs in the cooling system. Designers can recheck their design by using COOLECK, therefore defects due to bad cooling design will be prevented. On the other hand, COOLECK can decrease time and cost for checking the cooling system.

Keywords : Cooling System / The Design of Cooling System / Heat Transfer in Mold