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Development of the Extrusion Die Designing System

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The authors have been studied the numerical simulation and experiment of the extrusion die for many years. The limitations in the numerical simulation and difficulties of analyzing the experiment result cause some constraints when applying the result of these studies into a practical die designing in the manufacturing stage.

In this study, the authors tried to develop an extrusion die designing system considering both of numerical simulation and the experiment. A simple die was used in order to conduct a test case. Numerical simulations were performed to simulate the flow inside the die during the geometrical modification in the die designing. The 'know how' from the experiment results was considered as additional parameters when modifying the die.

This system still needs improvement, but it is an important progression in the die designing.