

The Objective:

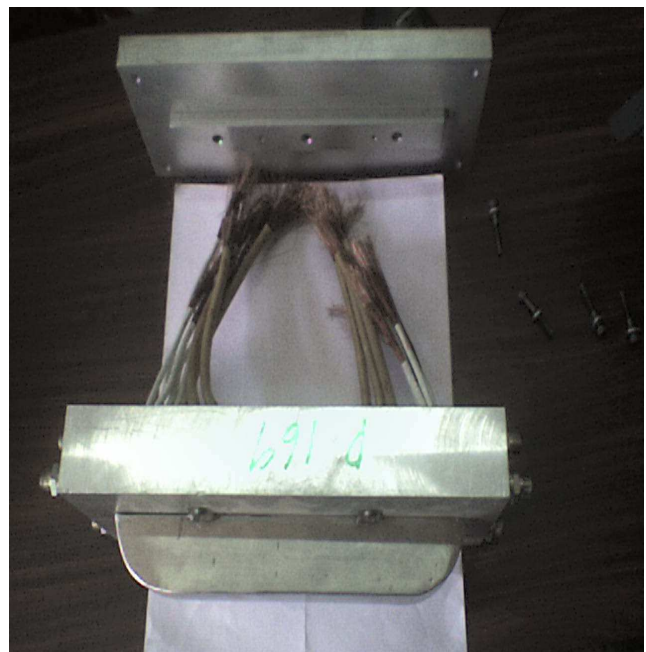
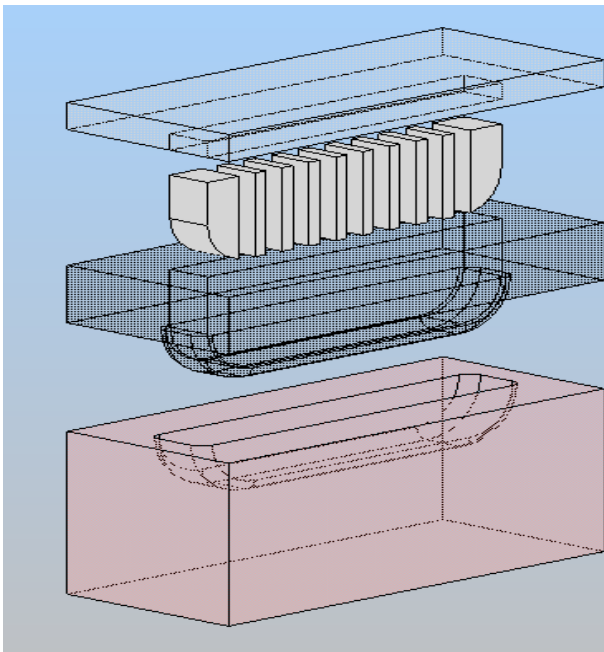
The customer had done electromagnetic analysis on a new method to heat injection molds uniformly to allow flow of material through thin long sections and wanted a prototype to be built.

The Challenges:

The initial electromagnetic design was not designed for manufacturing. The housing, cooling circuit, and methods to evaluate the prototype were also to be designed. The initial design had to be fabricated in 2 weeks in order to complete the tests on time.

The Solution:

A couple of iterations on the design from the electromagnetic point of view were complete at the customer site and the design was completed in 3 days. Designs were made in such a way that it took all manufacturing concerns into account and the drawings were released for manufacturing. The design was manufactured in a week. A jig was designed to ensure that thermal imaging and thermocouple data could be obtained to get temperature distribution over the entire surface in order to validate the electromagnetic design.



The Outcome: Customer was able to quickly test the theory with practical experiments and validate the results. This prototype has then been extended to a larger prototype that is being tested along with the actual injection mold die in Pittsfield, USA.