FDM - A CRUCIAL TOOL FOR AUTO INTERIORS

Hanil E-Hwa is a tier one supplier of automotive interior parts including seats and door panels.

FDM Helps Deliver Shorter R&D Times and High Quality

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- Choi Hae Seok, Hanil E-Hwa

Real Challenge

Hanil E-Hwa Company, Ltd. (Seoul, Korea) specializes in automotive interior components for passenger, commercial, recreational and heavy construction vehicles. Over three decades, it has grown into a $668 million (USD) tier one supplier with facilities in the U.S., China, Turkey, and India that produce door trim, headliners, package trays and seats. The company's success is built upon a philosophy of technological innovation, customer satisfaction and quality.

Achieving the company's goals requires advanced technologies, processes and materials. This includes a Fortus FDM system to satisfy its customers' demands for shorter R&D and product delivery times while attaining high quality standards. Hanil E-Hwa has found that FDM is a crucial tool to eliminate the inevitable design flaws that arise when accelerating the product development and manufacturing process.

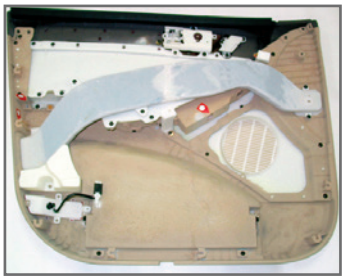
According to Choi Hae Seok, junior research engineer, "Every part will have some type of challenge. To eliminate the trial-and-error approach to resolution, we apply rapid prototyping to give us an understanding of the root cause and to discover the best solution. Prior to rapid prototyping, problems would surface in the processes between design finalization and pre-production tooling."

Real Solution

"With the [Fortus] machine, we make parts quickly and use them to check dimensions, fit, ease of assembly and the practicality of the design," says Seok. This expedites the process and allows engineers to resolve design problems before launching production manufacturing.

The Hanil E-Hwa design team has used other prototyping methods such as photopolymer and sintering technologies, but find that FDM is a superior process. "Team members say that FDM has advantages that include part strength and ease of modification," says Seok. "These are important traits when assembling prototypes for confirmation of quality and suitability of design."

Supporting its six Korean and nine overseas factories, Hanil E-Hwa operates its Fortus FDM system around the clock with typical monthly usage of 600 hours. Over the course of five years, the Fortus machine has saved the company more than $830,000 in prototype expenses. Savings are important, but the real benefits are discovering problems early, producing new product faster and exceeding customer's quality demands.



The company uses FDM to prototype its products, such as the door panel components shown.

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