

Patternmaking Enters The Digital Age By J. Scott Howell

The use of laser scanning to produce three dimensional models which can be cut into metal casting patterns using a three dimensional router.

The time honored trade of patternmaking for metal casting patterns has remained relatively unchanged for over 150 years. A highly skilled artisan creates a master pattern in wood, clay, wax, or plastic which is used to create a working pattern to be used by a foundry to make metal castings. The patternmaker uses drawings, or in the case of historic preservation, remnants to create these patterns.

This has changed as patternmaking enters the digital age. Using a hand-held laser scanner, a field engineer can create a three dimensional model of ornate metal work in a laptop. The laptop accompanies the engineer to the shop where the model is refined, resized for metal shrinkage, and converted to Mastercam which allows the model to cut into a three dimensional pattern using a three axis router. The pattern is then mounted and sent to the foundry for castings.

A physical demonstration of the process can be arranged.