

## Processing Design of Miniature Casting Incorporating Stereolithography Technologies

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**Abstract :** Investment casting is commonly used in the production of metallic components with complex shapes, due to its high dimensional precision, good surface finish, and low cost. However, the process is cumbersome, and the period between trial casting and final production can be very long, thereby limiting business opportunities and competitiveness. In this study, we replaced conventional wax injection with stereolithography (SLA) 3D printing to speed up the trial process and reduce costs. We also used silicone molds to further reduce costs to avoid the high costs imposed by photosensitive resin.

**Keywords :** investment casting, stereolithography, wax molding, 3D printing

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