

## **Micro Metal Injection Molding of STS 316 Nanopowder by Using Lost Mold Process**

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Microcomponents have potential market in new milenium. Micro metal injection molding is one of manufacturing technique to produce microparts. STS 316 nanopowder (average diameter of 100 nm and spherical shape) was mixed with thermoplastic binder to compose the feedstock. Binder system was used consist of: 25 wt.% paraffin waxes, 20 wt.% carnauba waxes, 20 wt.% bees waxes, 25 wt.% ethylene vinyl acetate, 5 wt.% polypropylene, and 5 wt.% stearic acid. Rheological and thermal properties of the feedstock were examined. SU-8 negative photoresist was used as a micro mold, which was fabricated by using photolithography technique. The feedstock is inserted in to micro cavity by applied low pressure injection molding process. Methyl propyrolidinone was used to dissolve SU-8 mold. The objective of this research is to review micro metal injection molding by using lost mold process to fabricate microparts.

Keyword : micro metal injection molding, STS 316 nanopowder, SU-8 micro mold

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