

## عنوان مقاله:

Determination of critical and optimal powder loading for 316L stainless steel for Powder Injection Molding process

## محل انتشار:

ششمین کنفرانس بین المللی متالورژی پودر (سال: 1397)

تعداد صفحات اصل مقاله: 1

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## خلاصه مقاله:

Powder Injection Molding (PIM) uses the shaping advantage of injection molding but is applicable for metals and ceramics. Powder loading is one of the important factors that have a great distribution on rheological behaviors. In this paper feedstock was made from mixtures of metal powder with particle size of  $5\mu\text{m}$  and the binder of 55% Paraffin Wax, 40% Polyethylen and 5% stearic acid. Four kind of feedstocks were prepared at the powder loading of 60, 64, 68 and 72%. Powder loading have been adapted to injection and tested to find out an optimum feedstock. The optimal powder volume loading has been chosen 68% for 316L stainless steel feedstock. This sample shows the minimum sensitivity to shear rate and temperature and in a wide range of temperature has a nearly steady viscosity, consequently demonstrate the best behavior during injection molding

## کلمات کلیدی:

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