

Complexity Simplified

Indo-MIM is a one stop solution provider to manufacturer's for their complex components. Not only does Indo-MIM produce Metal Injection Molded (MIM) parts of the highest quality, but also provides its customers with completely assembled solutions. In this issue, we introduce you to an assembly that was created by putting together five different MIM and machined components on a mechanical assembly line.

Manufacturing Challenge

- **Earlier method** : No earlier method. This is a new product
- **Reason for choosing MIM** :
 - Increased cost savings in the project because of large volumes
 - Not economically feasible to machine, as each component requires a lot of machining operations



Output shaft, lever and cover

Solution

- Assembly of three parts made through MIM and two parts are made through machining



Engineering Challenge

- **Highly challenging design** :
 - Complex cross-holes in the interior of component
 - High tolerance of +/- 5µ in certain regions
 - Critical honing operation to be performed after completion of assembly

Solution

- **Complete internal structures formed in the tool**
 - Cross-holes are formed in the tool with minor reaming operations
- **Collet was manufactured using a Swiss style lathe to eliminate deflection and improve accuracy**

Newsletter Spotlight

The part won the 2014 MPIF "Award of Distinction" in the "Hardware" category

Indo-MIM estimates cost savings of 20% over any other manufacturing method

Indo-MIM delivers 150,000 assemblies to the customer annually

One of the most complex parts to be made through MIM

Shaft has highly complex geometry with three cross-holes interchanging at 120°

The output shaft is made of MIM 4605, with a hardness of 70-100 HRB

Indo-MIM Receiving MPIF Award For The Component



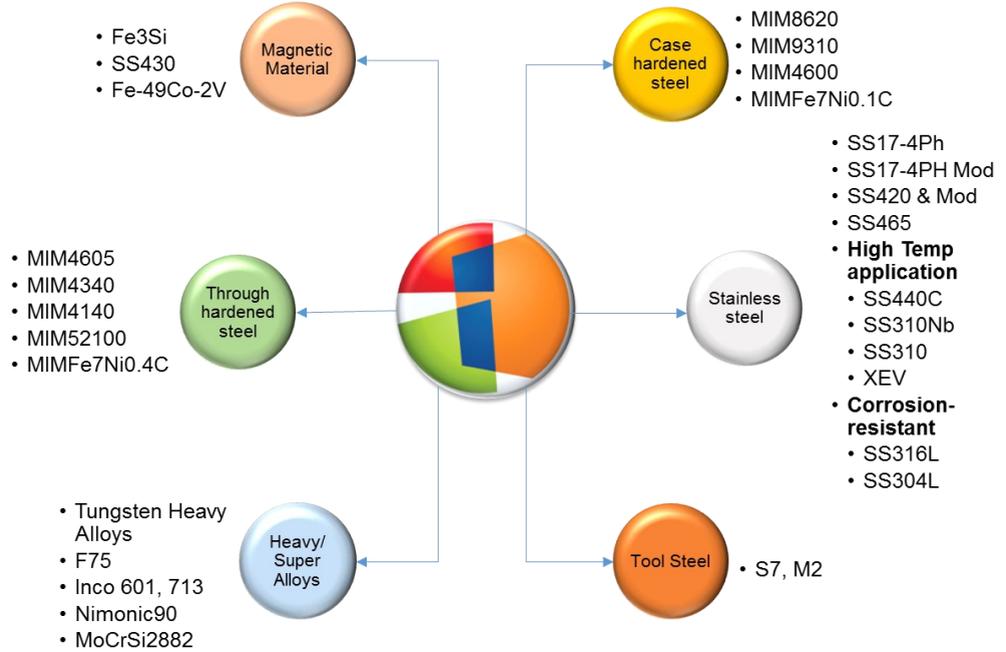
MPIF President Mr. Richard Pfungstler presented the 2014 MPIF "Award of Distinction" to Mr. Mukund, R&D and Mr. Akhiljit & Mr. Senthil, Sales & Marketing of Indo-MIM at Orlando, Florida

Indo-MIM Advantages

Indo-MIM reduced the manufacturing cost of the component by 20%. No industrial pollutants were released during the manufacturing process.

Indo-MIM's specialty lies in manufacturing highly complex parts. Mechanical properties of parts produced through MIM are superior to castings & powder metallurgy (reflecting fine particle size & high sintered density). Parts made through MIM are near net shape.

Materials We Offer



Questions or comments - Write to us at innovation@indo-mim.com or call at +91 80 2204 8800/2797 1419

Visit us at <http://www.indo-mim.com/>

