

Complexity Simplified

The global emission standards are getting stricter each year and consumers are demanding more fuel efficient vehicles from the automakers. This has led to the development of innovative technologies like turbochargers, GDI pumps, SCR, EGR etc to combat this situation. These new technologies are pushing the boundaries of manufacturing. Many components in these systems cannot be manufactured through traditional methods and require new age metal working processes like MIM to manufacture them.

Manufacturing Challenge

- **Earlier method** : Machining of individual components
- **Reason for change** :
 - Increased cost savings in the project because of large volumes
 - Restrictions in machining the interior contour of the components



GDI Pump Components

Solution

- Entire component was produced through MIM with minor machining operations



Engineering Challenge

- **Highly challenging design** :
 - Complex cross-holes in the interior of component
 - Complicated design of internal structures in the component
 - High volumes

Solution

- Complete internal structures formed in the tool
- Special gating & venting system to ensure complete filling of tool
- MIM ensures that there is consistency in quality between the first & one millionth piece

Newsletter Spotlight

The part won the 2014 MPIF "Grand Prize" in the "Automotive" category

Indo-MIM created estimated cost savings of 35% over the previous manufacturing method

Indo-MIM delivers one million pieces to the customer annually

One of the most complex parts to be made through MIM

Component improved pump performance resulting in 10-20% economy boost

Three of the parts are made of 440C stainless steel, while the fourth is made of 17-4 PH

Indo-MIM Receiving MPIF Award For The Component



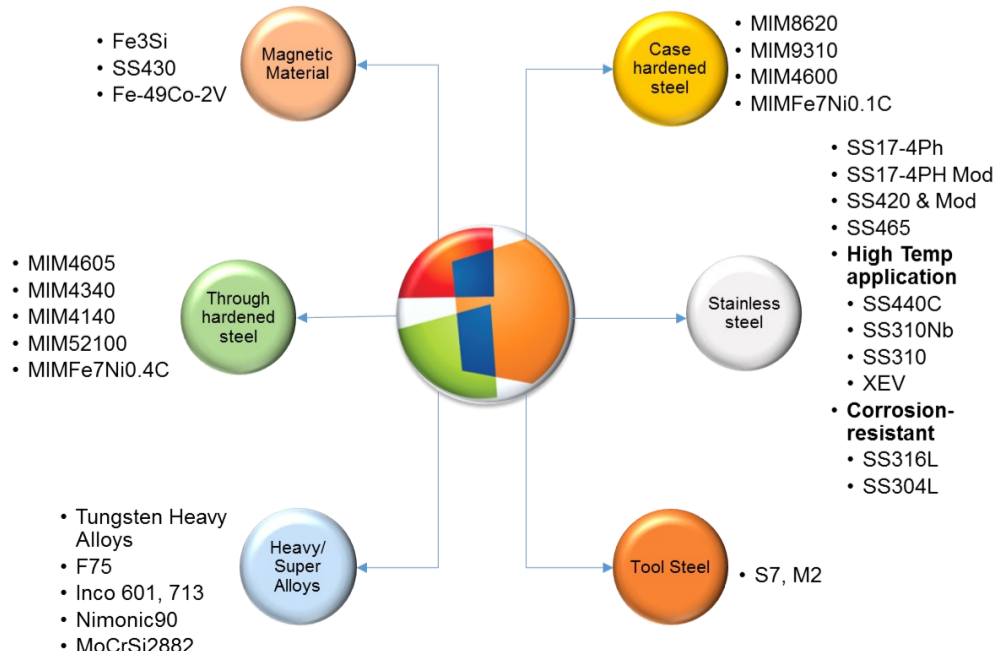
MPIF President Mr. Richard Pfungstler presented the 2014 MPIF "Grand Prize" to Mr. Jag Holla, VP-Sales & Marketing and Mr. Krishna Chivukula Jr, CEO of Indo-MIM at Orlando, Florida

Indo-MIM Advantages

Indo-MIM reduced the manufacturing cost of the component by 35% over the previous method. 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/>

