Issue 7, October 2015

Complexity Simplified

Most of us have dropped our mobile phone in water at least once or know someone who has done so. The water enters the phone and short circuits it. To solve this problem a leading mobile phone manufacturer decided to make water proof phones. One of the biggest challenges was to make a mobile shell. The component that is described in this publication is difficult to be made by any manufacturing process other than MIM.

Manufacturing Challenge

- **Earlier method** : Sheet metal processing + welding
- **Reason for change** :
  - Inability to produce at the rate of over one million units per month
  - Undercut profile, which is impossible to achieve through sheet metal processing

Mobile Shell

Solution

- Entire component was produced through MIM with no additional machining operations

Engineering Challenge

- **Highly challenging design :**
  - Very low wall thickness of 0.25 mm
  - High aesthetic requirements of 0.4 microns Ra
  - Design features with tight

Solution

- **Finishing operations performed include vibro-barreling & glass bead blasting :**
  - De-burred & polished surface
- **Elevated filling temperature to enable defect-free merging lines, inspite of very low wall thickness**

Newsletter Spotlight

The part won the 2015 MPIF "Award of Distinction" in the "Electrical" category

Indo-MIM created estimated cost savings of 20% over the previous manufacturing method

Indo-MIM delivered one million pieces to the customer

Design features thin cross-sections & internal undercuts, requiring complex core matching in tool cavity

Material used was MIM 17-4 PH stainless steel with hardness of 35 HRC

Indo-MIM Receiving MPIF Award For The Component

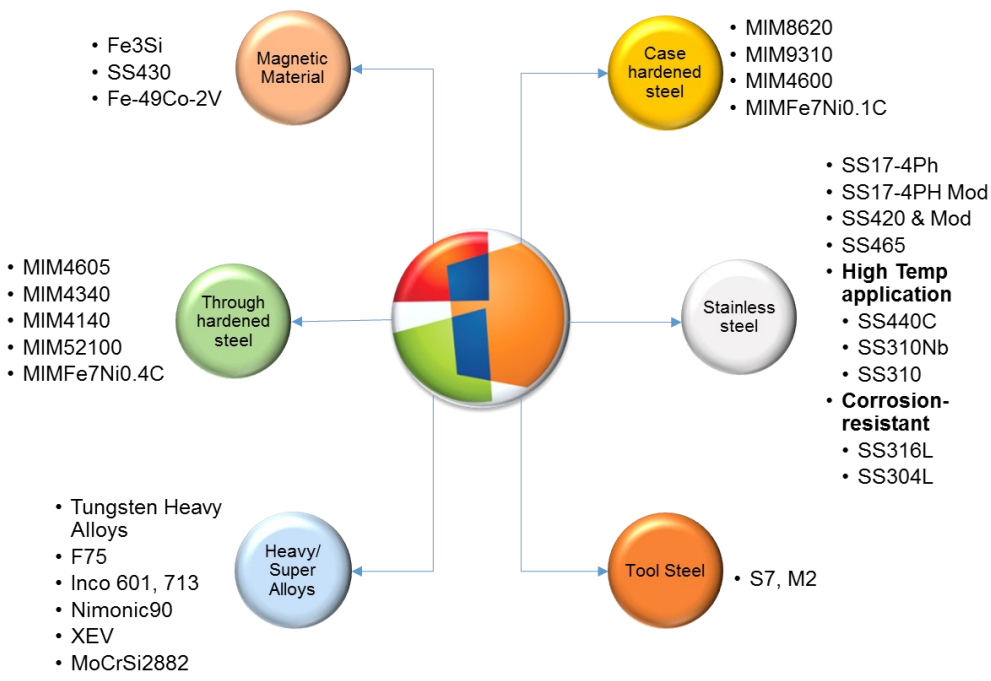
Mr. Kiran Kumar, General Manager (Sales & Marketing) Indo-MIM and Mr. Mukund from R&D with the 2015 MPIF "Award of Distinction" at San Diego, California

Indo-MIM Advantages

Indo-MIM reduced the manufacturing cost of the component by 20% 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/