

Development of production in various material succeeded by μ -MIM

- Development trend of magnetic materials -

Many parts of soft magnetic materials are used as element parts that greatly influence the miniaturization, high functionality and high accuracy of the final product regardless of industry or application. In recent years, movement towards electric motorization of the automobile industry is active, and its R&D contents are diverse but mainly aimed at energy saving and resource saving. Approaches toward solution of problems are being actively pursued from the development of new alloy systems, addition of trace metals and surface treatment. However, many of them often have a trade-off relationship with magnetic properties, so delicate adjustment is required.



Many customers are considering changing production method to MIM due to expansion of production quantity and design change to smaller and more complex shape. Also we receive many inquiries regarding new material trial and development for mass production. We have experiences in soft magnetic production, so please do not hesitate to contact us.

- μ -MIM realizes gear production -

Small module

Smaller than the standard exist



Micro gear mass production

Utilising high precision mass productivity which is a feature of μ -MIM, it realised the mass production of gear module 0.5 or less with high accuracy. It is also possible to correspond to orders of 1 million units per month for internal or helical gears. We also accept the mass production of gear module 0.02.

Integrated gear

Space saving, cost reduction and higher performance

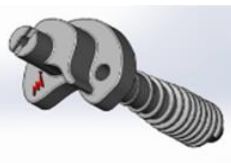


Free from the design restriction

For fixing gears and shafts, it requires set screw, key, pin, splines, and so on. However, MIM is free from the gear design restriction, thus any integration is possible. Not only by reducing the number of parts but also by realising high accuracy and strength, we will be able to support cost and space saving for all kinds of small gears.

Special gear

Innovative design to manufacturing



Experience in latest medical equipment parts mass production

Totally free from the design restriction, thus any special gear, such as non-circular, intermittent, eccentric gear, or tooth design are also available. μ -MIM can realise any tooth designed mass production and not only gear itself but also the case. It is possible to produce the case with internal gear till the very bottom end.

- Development new applications of titanium-based material by μ -MIM -

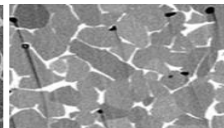
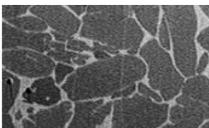
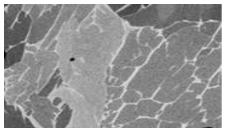
Mass production of complicated design with tight tolerance



- Reduces the number of parts by integrating the shaft and sliding part -

μ -MIM can show its ability in mass production of a component having less than 1 mm diameter hole, many free curved surfaces. Also integration of multiple components will be realised. The difficulty of welding, a weakness of titanium materials, is solved by μ -MIM technology.

New Ti alloy trial



- Production trial with analysis and evaluation -

It is one of the best advantage to create new alloy easily in powder metallurgy. Titanium-based alloys change their structure significantly according to additives and heat treatment parameter. We support your new alloy development not only the production trial but also the analysis of crystal structure and so on.

Additional process consulting



- Cooperation with top manufacturers -

Titanium alloys requires unique technology for secondary or surface treatment. The standard additional treatment such as mirror polishing, nitride, anodizing and laser engraving, not any manufacture can handle titanium product appropriately. We will introduce those titanium capable manufactures not only inside but also outside of Japan.