Jpma JAPAN POWDER METALLURGY ASSOCIATION

2017Report for MIM Market

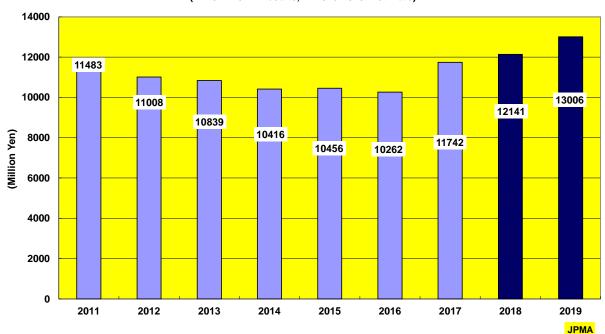
"Annual total sales amount was 11.74 billion Yen and Sales volume has increased than last year."

We did this research by sending the questionnaire to total 21 companies including member companies and non-member companies. We made the statistics from data of total 20 companies.

The summary of that is as follows.

1) Market Scale

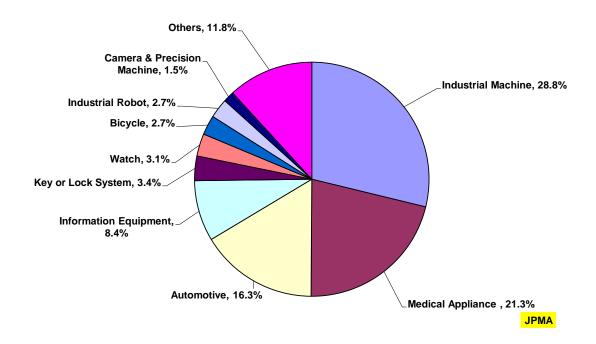
The sales amount in 2017 was 11.74 billion Yen. That was 14.49% increase from the previous year and this increase was since 7 years ago. The reason of this increase was because of the wave of prosperity over the world. From now, because of this production increase, several companies will expand their production capacity by that yearly 5% increase is expected. By 2020, the production level will reach the level before bankruptcy of Lehman brothers.





2) Breakdown of the usage field

Figure-2 shows that Industrial Machine parts were 28.8% (previous year: 26.7%), Medical appliance parts were 21.3% (previous year: 19.9%), Automotive parts were 16.3% (previous year: 16.9%) and OA & Information Equipment parts were 8.4% (previous year: 9.1%). The total of Industrial Machine parts, Medical Appliance parts and Automotive parts was 66.4%. That is the stable demand field of MIM. In other usage, Industrial Robot is the field of the future demand increase, because by automation of production line, many robots will be introduced. And also we expect the expansion of Medical Appliance parts because of high annex value.



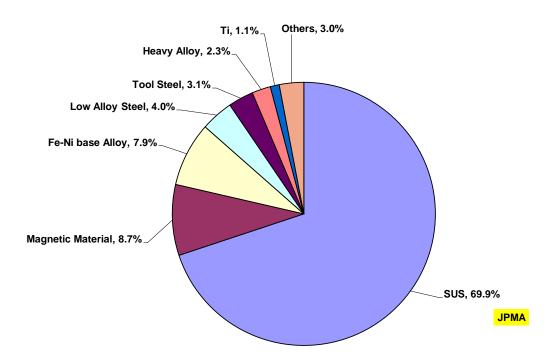
Distribution Ratio of MIM Markets (FY2017)

3) Breakdown of materials

Figure-3 shows that SUS materials were 69.9% (previous year: 66.8%) that was nearly 70% of total usage. SUS materials, Magnetic Materials and Fe-Ni materials accounted for about 87%. SUS Materials which are the main material of MIM are 8,202 million Yen that was 19.7% increase from the previous year. Magnetic Material was 1.023 million Yen that was 10.2% increase from the previous year.

Fe-Ni base alloy was 929 million Yen that was 2.4% decrease from the previous year. FE-Ni base alloy was decreased continuously, because of the continuous replacement to SUS materials Magnetic Material has constant demand to special use.

As new materials, the development of Heat resistant steel and Porous material are advanced.



Distribution Ratio of MIM Materials (FY2017)