

Paper title: Japan Magnesium Market Outlook

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Abstract: Reporting about the Magnesium market situation based on the analysis on Import & Export statistics & our own investigation on domestic production data in the first section. Then, focusing analyze into recent movements & tendency surrounding its market in Japan. The production of magnesium alloy parts for Automobile, laptop PC, Cell phones, Digital cameras had been booming up in the first half of 2000's, but the sharply climbing the International market price during Beijing Olympic games & very high exchanging rate for Yen after Financial crisis had almost killed this industry. As a result, not like other areas, Aluminum additive usage shares over 50% of its 40,000t of annual demands in Japan. Japan has no domestic producer after shut down of 3producers in 1992 & depends on China for 95% of supply. So, the urgent required things are 1) Diversification of the suppliers & 2) Developing new applications. Currently, we are trying to develop the body for the High speed express train, Batteries, Motorcycle parts, Rolling sheets for phone parts etc.

Introduction:

The total consumption for Magnesium metal in Japan is reported as 36,000t in 2013. This is 4.4% of the global market. 88% of its raw material supply depends on China, 7% on domestic recycling industry & the rest 5% is coming from other countries. Japan had a long history on its domestic production from 1921, but it had terminated in 1994.

As for the consumption, the usage for Aluminum alloy additive shares 56%, the products of Magnesium alloy is 25%. The members of Japan Magnesium association are recently making efforts to develop new applications such as the extruded flames for high speed express trains, Magnesium batteries, Magnesium fuel for generators & High dumping parts for Audio sets (cables & speakers)

After the financial crisis in 2008, the general Japanese economy had slow down until 2012. But the new policy of the Prime minister Mr.Abe begun encourages recovering the growth, recently. His policy is consisted by 3 main actions (He calls it as "3 arrows"). The yen – dollars exchange rate follows his growth strategy & helped the stock market price picking up.

We expect that recovery on the economy would support Magnesium consumption in Japan.

For the purpose of supporting the growth of Japanese Magnesium market, Advanced Material Japan Corp. is as a member of Japan Magnesium Association willing to secure stable raw material supply sources with reasonable price level.

1. From the 4 main application fields, Aluminum additive usage is the most stable sector. On the contrary, the demands for Magnesium alloy products are sharply changing. We experienced highly growth in the first half of 2000's & recent slow down after the economic crisis.

50% of demand as Aluminum additive belongs to 3 big Aluminum rolling producers. The other 50% are divided by several consumers.

The previous growth on Magnesium alloy parts are supported by Die-casting & Thixo-molding producers. But both of these industries had shifted to abroad after the financial crisis.

2. Except the 6% of recycled Magnesium alloy ingots, Japan depends 94% of Magnesium raw material supply on the import. Also 95% of imports are from one country - China. Historically, raw material supply situation was well balanced among the domestic production & import from Norway, Canada & the United States in before 1994. We expect more supply from alternative producers.

Also, some universities together with Japan Magnesium Association are investigating to resume domestic Magnesium production. Japan has rich Dolomite resources & some universities are researching the Sunlight laser decomposition reduction method.

3. The members of Japan Magnesium Association are very active to develop new Magnesium materials & bland new applications.

Most of recent efforts for developing new magnesium materials are paid for rolling & extrusion process. Also a joint venture of a university & smelting producer is developing non-flammable Magnesium alloy.

As for the new applications, various directions are tried, recently. Some group are developing an extrusion body parts for high speed express trains, some group develop batteries & high dumping parts for Audio sets

Conclusion:

We expect the increase of domestic demand & exports from the new policy. We expect Strong RMB & weak Yen can slow down the industrial oversea shifts & encourage the die-casting & Thixo plants coming back to Japan. The members of Japan Magnesium association are very actively developing new Magnesium materials & bland new applications. Japan can be the dispatch & production base of new Magnesium products & might dramatically increase the demands for Magnesium raw materials.

Consumers have Strong demand for Alternative supply channels.

We expect that Russian, Israeli, Korean & Malaysian producers would make stable supply for Magnesium ingots. Also, we welcome new producer' s joining. JMA supports the researches for the possibility of domestic Magnesium reduction. Some universities research the Sunlight laser decomposition reduction method. Advanced Material Japan Corp. as a member of Japan Magnesium Association is willing to widely develop both domestic & oversea supply channels & make efforts to realize the stable supply of Magnesium ingots to Japan with reasonable price level. For this purpose, Advanced Material japan Corp. considers making a joint-venture with the existing producers, making investment for new projects & promotion of technology transfers.