**IMA News**

Below are articles and summaries of magnesium related stories. IMA Member companies are asked to distribute the IMA News to their employees. IMA member company employees wishing to receive the monthly IMA News issues should send their email addresses to the IMA World Headquarters. We appreciate all member company press releases and announcements for inclusion in the monthly IMA News issues. Please send your news to info@intmag.org.

**January 2015, Issue #1**

<table>
<thead>
<tr>
<th>IMA's 72nd Annual World Magnesium Conference Registration Coming Soon!</th>
<th>September Japan Magnesium Newsletter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gain Exposure at the IMA's Annual Magnesium Conference</td>
<td>December China Magnesium Industry and Market Bulletin</td>
</tr>
<tr>
<td>Helmholtz-Zentrum Geesthacht Magnesium Research Award 2015</td>
<td>Industry News</td>
</tr>
<tr>
<td>December Magnesium Review from Metal-Pages</td>
<td>Upcoming Events</td>
</tr>
</tbody>
</table>

**IMA's 72nd Annual World Magnesium Conference Registration Coming Soon!**

The IMA's 72nd Annual World Magnesium Conference, scheduled for Sunday, May 17 through Tuesday, May 19, is taking place at The Fairmont Hotel Vancouver, Canada.

The program for the 2015 Annual Magnesium Conference will be centered on IMA's theme, The Global Voice and Resource for Magnesium. The IMA Annual Conference offers a comprehensive industry experience with technical papers from the brightest minds in the industry. Authors offer the latest breakthroughs and freshest ideas in every aspect of the magnesium industry.

Feed your intellectual side with motivational, industry and business speakers that will deliver the information needed to help you stay on top of coming trends and opportunities. Keynote speakers include:

- Robert McHale, Alcoa Mill Productions Lancaster, *Future Impact of Magnesium in the Aluminium Industry*
- Dr. Armin Plath, Volkswagen Group Research, *Materials and manufacturing processes for sustainable lightweight design at Volkswagen AG*
- Jinxiang Xu, China Magnesium Association, *Report on China Magnesium Industry*
- Daisuke Konishi, Japan Magnesium Association, *The direction of development of Magnesium products in Japan*
- Tim Skszek, Magna International, *The right place for magnesium in a mixed material vehicle*

Feed your social side with a number of networking events that encourage camaraderie and fun. An element of relaxation is also in the mix with the invigorating location of Vancouver, an Oceanside oasis on the mainland of British Columbia.

Networking and social events include the popular President's Reception at the Vancouver Aquarium on Sunday, May 17; the Member's Only Boat Cruise around the Vancouver Harbour on Monday evening and the Closing Reception & Banquet on Tuesday evening.

Online registration is coming soon! Please mark your calendar and watch for upcoming details at [www.IMAworldconference.org](http://www.IMAworldconference.org)!

Delegates are encouraged to make hotel reservations as soon as possible. A block of rooms at The Fairmont Hotel Vancouver is reserved at the special rate of $199/night plus tax for delegates. To make your reservation, follow the link to The Fairmont Hotel Vancouver online reservations at [www.IMAworldconference.org](http://www.IMAworldconference.org) or click here.

*Back to top*

**Gain Exposure at the IMA's Annual Magnesium Conference**

Make plans now to exhibit at and/or sponsor the International Magnesium Association's 72nd Annual World Magnesium Conference. Reach a focused and qualified audience of magnesium industry professionals who are looking for equipment, services and answers to questions.

The IMA 2015 Annual Conference will feature a superior technical program focused on innovations and advances in the magnesium industry - and your company should be there. At the conference, delegates come prepared to ask questions, discuss problems and present challenges, so exhibitor personnel must be technically astute to take full advantage of this opportunity.

The IMA Expo gives you the chance to:

- Reach a global audience in one convenient place
- Showcase your technical know-how, innovations and products
- Demonstrate your company's commitment to the industry
- Generate awareness for your company's capabilities.

**Exhibit space is limited... so don't delay!** Space is assigned on a "first come, first served basis" so reserve your spot today!

**Sponsorships** are also an excellent way to promote your company and be identified as a proud supporter of the International Magnesium Association and the industry. Companies can take advantage of the opportunity to reach top industry executives by sponsoring the 2015 Annual Magnesium Conference. Be the focal point of the energy and excitement in Vancouver at an event that consistently delivers value to delegates. This year, we have four levels of Full Conference Sponsorship and two levels of Individual Event Sponsorship opportunities available.

The 2015 Annual Conference will be held at The Fairmont Hotel Vancouver, in downtown Vancouver, Canada, May 17-19, 2015. Click here for more details on exhibiting and sponsoring at the IMA's 2015 Annual Magnesium Conference.

*Back to top*

**Helmholtz-Zentrum Geesthacht Magnesium Research Award 2015**

In order to bring forward the research work in the field of Magnesium and its alloys, in 2007, Helmholtz-Zentrum Geesthacht (HIZG, formerly known as GKSS) created The HZG Magnesium Research Award.

The aim is to honour innovative work by an individual researcher in the area of the science and technology of magnesium alloys. The award is donated with 5,000 Euro and will be attributed bi-annually.

The main focus will be on alloy and process development, the characterization of micro-structure-property relationships with regard to the chosen processing technology and development of in the field of enabling technologies (e.g. coating and joining). The proposal submitted should reflect excellent scientific work and demonstrate that it makes a significant contribution to a deeper knowledge and understanding of magnesium alloys or to new applications of this light-weight material.
Velbon Corporation has launched a new monopod capable of taking self-portrait photographs named "ULTRA STICK SELFEI" on 10th Oct.

Velbon released a new monopod capable of taking self-portrait photographs and the background successfully within a frame.

Domestic Magnesium Market - September, 2014

Kumamoto University entered into collaborative research with Boeing on magnesium alloy use

Kinomoto Shinsen Co., Ltd. developed MIG welding wire made of flame-retardant magnesium alloy

The capacity utilisation of the titanium sponge industry is as low as 35pc, with only seven producers still in production. Demand from the steel industry, where magnesium powder is used as a desulphuriser, remains static, with prices down to their lowest in the past ten years.

The Chinese magnesium market has levelled out in the past days after a brief decline early last week caused by the holiday slowdown. But the market remains under pressure in the wake of sluggish aluminium, titanium sponge and steel industries.

The market started to slide in late July as supplies increased after summer equipment maintenance, while demand has not caught up with the fast growth of supply.

Magnesium production kept increasing in the first half of 2014, with production hitting a peak at 94,500t in July.

The market for magnesium remained stable in the first quarter. Automotive continues to be a bright spot and the [beverage] can market remains good.”

“Spot’s been dead for a while. But everyone is still taking what they contracted for,” said another trade source. “I think we could see a bit more activity as we move through the first quarter. Automotive continues to be a bright spot and the [beverage] can market remains good.”

The US magnesium market has been somewhat insulated against a major erosion over the past several months despite the lack of demand due to a reduction in imports from countries like Russia and Kazakhstan, while a shortage of aluminium scrap in the autumn of last year forced some consumers to switch into other alloying materials like magnesium. It comes as underlying demand for magnesium remains robust with trade sources reporting that consumers are taking their full amounts under long term contract deliveries.

"Spot's been dead for a while. But everyone is still taking what they contracted for," said another trade source. "I think we could see a bit more activity as we move through the first quarter. Automotive continues to be a bright spot and the [beverage] can market remains good."

The aluminium alloying sector is being underpinned by the automotive industry, while volumes into the extrusions industry are expected to flatten out due to a seasonal downturn in the construction industry. US aluminium producer Alcoa said this week it expects steady growth in the automotive industry and forecast global automotive production to be up 2-4pc, driven by replacement demand and low lending rates in North America and both the growth of the middle class and clean air regulations in China.

The New York-based company also said that building and construction is set to continue to improve, with global sales growth of 5-7pc as the North American market is expected to sustain its gradual recovery in 2015.

Magnesium is primarily used as an alloy with aluminium, accounting for some 45% of total world consumption. Another 35% is consumed in magnesium alloys in structural metals, about 13% in steel making, with the rest used in electro-chemical and other sectors.

The Chinese magnesium market has levelled out in the past days after a brief decline early last week caused by the holiday slowdown. But the market remains under pressure in the wake of sluggish aluminium, titanium sponge and steel industries.

The market started to slide in late July as supplies increased after summer equipment maintenance, while demand has not caught up with the fast growth of supply.

Magnesium production kept increasing in the first half of 2014, with production hitting a peak at 94,500t in July.

The capacity utilisation of the titanium sponge industry is as low as 35pc, with only seven producers still in production. Demand from the steel industry, where magnesium powder is used as a desulphuriser, remains static, with prices down to their lowest in the past ten years.

Consumers are living off contracts and plan to keep stocks to a minimum level before the Chinese Spring Festival in mid-February. The export market is stable with overseas buyers sending enquiries for the next quarter, but most enquiries are just testing the water. China exported 202,722t of the metal in the first 11 months of 2014, up 5.9pc against the same period in 2013.

JMA September Magnesium Newsletter Japan
Vol 25. Covering the news for October 2014

The Japan Magnesium Association

INDEX

News in Japan
Velbon released a new monopod capable of taking self-portrait photographs and the background successfully within a frame
Kita-daito-jima enters the “dolomite world” by blending the dolomite into mineral soaps.
Kinomoto Shinsen Co., Ltd. developed MIG welding wire made of flame-retardant magnesium alloy
Kumamoto University entered into collaborative research with Boeing on magnesium alloy use
Oricon Energy received a patent on a magnesium fuel cell

Domestic Magnesium Market - September, 2014

News in Japan
Velbon released a new monopod capable of taking self-portrait photographs and the background successfully within a frame
(Source: My Navi News 9th Oct., 2014)

Velbon Corporation has launched a new monopod capable of taking self-portrait photographs named "ULTRA STICK SELFEI" on 10th Oct.

It is lightweight and the most suitable for taking self-portrait photographs to be uploaded on Blog and SNS. Its usage is to attach a camera on a camera platform like normal monopods, to elongate and to contract the stick part (pedestal) to a preferred composition. It is extendable from 18cm to 72cm, and is equipped with “the ultra

Click here to download the award procedure.

For more information and to submit your entry, please contact
Prof. Karl Ulrich Kainer
Helmholtz-Zentrum Geesthacht
Centre for Materials and Coastal Research
Magnesium Innovation Centre (MagIC)
Max-Planck-Str. 1
D-21502 Geesthacht, Germany
magnesium@hzg.de

We would very much appreciate if you could recommend or nominate a candidate for this award.

Back to top
On November 27, experts by Chongqing Science & Technology Commission examined pilot platform for magnesium alloy sheet and strip processing carried out by registration report, Eontec, in the next step, will apply to China Food and Drug Administration for clinical trials. It is expected that Eontec may carry out the clinical trial if bone fixation screw of biodegradable magnesium comes through the examination and acceptance of National Institute for Food and Drug Control and receives related breakthrough for biodegradable medical magnesium alloys.

Eontec said biodegradable medical magnesium alloys program, applied to China Food and Drug Administration and as one of the important direction of Eontec, is major process for innovative medical devices, applied for the bone fixation screw of biodegradable magnesium.

The total exports of January-September 2014 consisted of 392.8 tons of the pure magnesium and the magnesium metal/alloys (36.4% increase vs. the same period the year before), and the export to China was 0.02 tons being at a low level. In September 2014, 96.0 tons of the magnesium alloys (302.0% increase vs. the same month the year before), and 0.2 ton of other products (96.3% decrease) were exported. In the other products, the export to China was 0.02 tons being at a low level.

On 22nd Oct., Kumamoto University announced that the university and Boeing Co. had signed collaboration agreement aimed at practical use of super-rapid-quenched and heat resistant "KUMADAI Mg Alloys" for commercial airplanes, which had been developed by Prof. Kawamura, Director of Magnesium Research Center, Kumamoto University.

In the collaborative investigation, the university improves the chemical compositions of the alloy to reflect the request of the company. A domestic maker makes materials, and the company develops techniques of forming and joining. The company disclosed that they would start the development of the next plane from 2020. In response to this, they will aim at the practical use in the structural parts of the air frame. According to Professor Kawamura, the alloy is produced by adding zinc and yttrium to magnesium, and by rapid-cooling after dissolving them at a high temperature. Despite 30% lighter than aluminum alloy "extra super duralumin" used for planes, this alloy has 5% higher strength. It is mentioned that approximately 10% weight saving is expected, and it leads to an improvement of fuel efficiency. Magnesium is the lightest in all the practical metals, but is weak against heat. Therefore, the U.S. Federal Aviation Administration (FAA) prohibits to use it for commercial airplanes, but the alloy developed by the university has passed the combustion tests of FAA. The ban on the use is expected to be lifted soon.

Furthermore, Oricon energy and S to M jointly develop the related peripheral techniques and aim at commercialization of the products as a trigger of the realization of "The Magnesium Circulating Society" in coordination with "Magnesium Soleil Project".

**Domestic Magnesium Market - September, 2014**

On September 27th 2014, the magnesium powder 252.6tons (41.2% decrease) and the other products 153.2tons (1161.2% increase). The import of the pure magnesium showed the large increase again. On the contrary, the import of the powder category decreased almost by half from the year before. Since the miscellaneous category maintained large import from China, the total amount of import in September became 3,021.3 tons (23.0% increase).

In September, the price of pure magnesium was 266.1 yen/kg, which indicated 10 yen/kg increase, 3.9% from the month before. Average of the import price was 263.8 yen/kg. The average price of the magnesium metal from China was 263.8 yen/kg. The average of the import price of the magnesium alloys was 313.3 yen/kg, increased by 15.6yen/kg, and it recovered to the 300yen/kg level.

The total imports of January-September 2014 consisted of 23,293.12 tons of the magnesium metal (12.5% increase vs. the same period the year before), 3,202.2 tons of the magnesium powder (4.8% decrease), and 1,697.9 tons of the other products (1041.3% increase). The total was 28,193.2 tons (16.4% increase) and indicated favorable recovery in each category.

**Import**

**Export**

In September, 96.0 tons of the magnesium alloys (302.0% increase vs. the same month the year before), and 0.2 ton of other products (96.3% decrease) were exported. In the other products, the export to China was 0.02 tons being at a low level.

The total exports of January-September 2014 consisted of 392.8 tons of the pure magnesium and the magnesium metal/alloys (36.4% increase vs. the same period the year before), 6.3 tons of the magnesium powder (165.8% increase), and 18.8 tons of the magnesium products (41.2% decrease).

**December China Magnesium Industry and Market Bulletin**

**Bone fixation screw of biodegradable magnesium came through examination and acceptance**

Dongguan Eontec announced that bone fixation screw of biodegradable magnesium, according to No.6(2014) review result of special approval for innovative medical device issued by China Food and Drug Administration, came through examination and approval for innovative medical device. Eontec, according to special approval process for innovative medical devices, applied for the bone fixation screw of biodegradable magnesium.

Eontec said biodegradable medical magnesium alloys program, applied to China Food and Drug Administration and as one of the important direction of Eontec, is major breakthrough for biodegradable medical magnesium alloys.

If bone fixation screw of biodegradable magnesium comes through the examination and acceptance of National Institute for Food and Drug Control and receives related registration report, Eontec, in the next step, will apply to China Food and Drug Administration for clinical trials. It is expected that Eontec may carry out the clinical trial lasting for 12-18 months.

**Chongqing’s first pilot platform for magnesium alloy sheet and strip processing came through examination and acceptance**

On November 27, experts by Chongqing Science & Technology Commission examined pilot platform for magnesium alloy sheet and strip processing carried out by Kinomo Shinsen Co., Ltd. (Higashiosaka City) announced on 15th October that they had developed the world's first "MIG welding wire made of flame-retardant magnesium alloy" in the end of September and had started test-marketing in Japan. Kinomo aims at the establishment of the real mass production system to sell it 3-5 years later. The product was developed in collaboration with Osaka Prefecture University, Department of Materials Science. It is mainly used for next-generation carriers including Shinkansen (bullet train) vehicles and automobiles for which weight saving is needed as well as apparatuses for robots and nursing cares. The company purchase the flame-retardant magnesium alloy billets, which Sankyo Tateyama Inc. developed, and carries out extrusion and wire drawing. The detailed process is not disclosed. The standard specification of the wire is 300m in length, 1.2mm in outer diameter. It is the first in the world that such an ultra-fine diameter is achieved for a product using flame-retardant materials. Furthermore, it is characterized by extremely few impurities, high dimensional accuracy and high roundness. It is under consideration to enhance the reliability of welded parts and to lengthen the wire in order to apply to actual structures. Concerning the application of the flame-retardant magnesium alloy to MIG welding, it is important to improve welding machines as well as the wire technology, because the relationship between melting behavior of the wire and the quantity of penetration is specific, and welding condition and welding machines must be well adapted. The company has been examining with a welder maker to diffuse the use of it.

**Kumamoto University entered into collaborative research with Boeing on magnesium alloy use**

On 22nd Oct., Kumamoto University announced that the university and Boeing Co. had signed collaboration agreement aimed at practical use of super-rapid-quenched and heat resistant "KUMADAI Mg Alloys" for commercial airplanes, which had been developed by Prof. Kawamura, Director of Magnesium Research Center, Kumamoto University. In the collaborative investigation, the university improves the chemical compositions of the alloy to reflect the request of the company. A domestic maker makes materials, and the company develops techniques of forming and joining. The company disclosed that they would start the development of the next plane from 2020. In response to this, they will aim at the practical use in the structural parts of the air frame. According to Professor Kawamura, the alloy is produced by adding zinc and yttrium to magnesium, and by rapid-cooling after dissolving them at a high temperature. Despite 30% lighter than aluminum alloy "extra super duralumin" used for planes, this alloy has 5% higher strength. It is mentioned that approximately 10% weight saving is expected, and it leads to an improvement of fuel efficiency. Magnesium is the lightest in all the practical metals, but is weak against heat. Therefore, the U.S. Federal Aviation Administration (FAA) prohibits to use it for commercial airplanes, but the alloy developed by the university has passed the combustion tests of FAA. The ban on the use is expected to be lifted soon.

Furthermore, Oricon energy and S to M jointly develop the related peripheral techniques and aim at commercialization of the products as a trigger of the realization of "The Magnesium Circulating Society" in coordination with "Magnesium Soleil Project".
Through the implementation of the project, Chongqing Academy of Science & Technology successfully builds the pilot line for magnesium alloy sheet/strip extrusion and basic research laboratory for new material analysis, forms a complete magnesium alloy sheet/strip processing system, through which Chongqing Academy of Science & Technology can produce magnesium alloy products such as notebook computers, mobile phones, car seats, and can provide technology for magnesium alloy enterprise for related testing, product development and other technical services. At present, the platform forms annual output of 100000 pieces of magnesium alloy notebook shell, and provides over 100 items of inspection and technical service.

**Magnesium alloy automobile parts project came into operation in Chongqing**

Recently, phase I project for magnesium alloy automobile parts carried out by Chongqing Yuanhe Litai Magnesium Alloy Manufacturing comes on stream. The project, following the agreement signed with Zhengyang Industrial Park Management Committee in August 2013 and covering 25 acres, attracts 0.45 bln. yuan of investment. Its 45,000 sqm standard workshop and 50 minl. yuan of investment, with 13000 mt of stocky of 1 million pieces of magnesium alloy automobile parts annually. At present, magnesium alloy casing and gearbox shell, made by Chongqing Yuanhe Litai Magnesium Alloy Manufacturing, are mainly for such auto brands as Zotye Auto, Dongfeng Motor and Haval.

Founded in 2013 and located in the Zhengyang Industrial Park of Qianjiang District, Chongqing Yuanhe Litai Magnesium Alloy Manufacturing, the former Shaanxi Yuanhe Litai Magnesium Alloy Manufacturing, is the first domestic producers for magnesium alloy parts research, production and sales. It, for a long time, engages in magnesium alloy and aluminum alloy research and engineering work, makes a number of important scientific and technological achievements and outstanding contributions to science and technology, and represents the current international leading level in the field of magnesium science and technology. In 2012, led by the Hebi Science and Technology Bureau, and Hebi Vocational & Technical College, technicians and experts compiled Technical roadmap of magnesium industry in Hebi, which is the first one in the magnesium industry, and also one of 10 national-level test centers in Chongqing. Subordinate to Chongqing Measurement and Quality Inspection Institute, the center, with 5260 square meters of test and measurement building, has 40 sets of advanced testing equipment. The centre undertakes the test of relevant judicial produce goods entrusted by administrative department of quality supervision, inspection, production licensing, judicial, arbitration and identification; carried out R & D and evaluation of new products; and implements the study on detection technology & methods, standards and testing equipment. Its service will cover Chongqing and surrounding areas, mainly including chemical component analysis(chemical analysis and chemical analysis instruments), mechanical performance testing (tensile test at room temperature, compression test at room temperature, performance test, hardness test, impact test, and fatigue test), organization structure analysis, surface performance testing, failure analysis and integrated test on powder characteristics.

**National Aluminum-Magnesium Alloys and Products Quality Supervision and Inspection Center enters into use in Chongqing**

On December 5, National Aluminum-Magnesium Alloys and Products Quality Supervision and Inspection Center, upon the examination and approval from experts organized by General Administration of Quality Supervision, Inspection and Quarantine, comes into formal operation in Nanchuan District, Chongqing. The center, approved by General Administration of Quality Supervision, Inspection and Quarantine, is a body of technical authority, which integrates research and test, and also one of 10 national-level test centers in Chongqing. The centre undertakes the test of relevant judicial produce goods entrusted by administrative department of quality supervision, inspection, production licensing, judicial, arbitration and identification; carried out R & D and evaluation of new products; and implements the study on detection technology & methods, standards and testing equipment. Its service will cover Chongqing and surrounding areas, mainly including chemical component analysis(chemical analysis and chemical analysis instruments), mechanical performance testing (tensile test at room temperature, compression test at room temperature, performance test, hardness test, impact test, and fatigue test), organization structure analysis, surface performance testing, failure analysis and integrated test on powder characteristics.

**Technical roadmap of magnesium industry in Hebi**

On December 30, press meeting of technical roadmap of magnesium industry in Hebi was kicked off. The related book systemically analyzes market management of magnesium science and technology. In 2012, led by the Hebi Science and Technology Bureau, and Hebi Vocational & Technical College, technicians from Hebi and domestic magnesium industry began compiling Technical roadmap of magnesium industry in Hebi. The related book systemically analyzes market demand and target, divides magnesium industry in Hebi into five segments including magnesium smelting and melting, maps out the technology roadmap for each segment, collects the content of the research in various fields, and finally summarizes the above results to map Technical roadmap of magnesium industry in Hebi, i.e. the general roadmap.

**Tianyu Group cut down primary magnesium production**

Tianyu Group recently announced that, in order to deal with the winter coal procurement difficulties, and international oil prices falling caused by coal tar prices tumbling, Tianyu Group apologizes for the inconvenience to customer. Tianyu Group recently announced that, in order to deal with the winter coal procurement difficulties, and international oil prices falling caused by coal tar prices tumbling, Tianyu Group cut down primary magnesium production from December 26 on, with capacity utilization rate from 80% down to 60%, resulting in primary magnesium output down to about 80t daily, consumption of raw coal dropping below 1500t, semi coke output to about 830t, spray coal to about 220 t, and coal tar to about 80t. Tianyu Group cut down primary magnesium production from December 26 on, with capacity utilization rate from 80% down to 60%, resulting in primary magnesium output down to about 80t daily, consumption of raw coal dropping below 1500t, semi coke output to about 830t, spray coal to about 220 t, and coal tar to about 80t.

**Tianyu Group cut down primary magnesium production**

Tianyu Group once realized 110t of output daily in 2014. The reduction by Tianyu Group will, to some extent, ease the contradiction between supply and demand of magnesium industry. Market analysts said that, in the current downturn conditions, to cut down production is a wise choice.

**Large-sized magnesium alloy production, welding and equipment project led by National Engineering Research Center for Magnesium Alloys came through examination and acceptance**

The project, approved by Ministry of Science and Technology, is a joint effort by National Engineering Research Center for Magnesium Alloys, Chongqing Academy of Science & Technology, Wenshi Yinguang Magnesium and known institutes at home and abroad, and represents the current international leading level in the field of magnesium alloys. The project, approved by Ministry of Science and Technology, is a joint effort by National Engineering Research Center for Magnesium Alloys, Chongqing Academy of Science & Technology, Wenshi Yinguang Magnesium and known institutes at home and abroad, and represents the current international leading level in the field of magnesium alloys.
The appraisal meeting, chaired by Chongqing Science & Technology Commission, was attended by experts from such well-known universities and institutes as Shanghai Jiaotong University and Beihang University. The experts listened to report by total project director prol. Panxiaoong on the implementation of the project, investigated the final products such as sheet, profile and ring, fully affirmed the achievements related and agreed its acceptance with excellent grades.

The project made a number of technological breakthroughs in the R & D of magnesium materials for rail transit, automobile and aerospace, and solved series of key technical problems related to molten magnesium alloy purity at low cost, large ingot crack control, wide plate edge crack control, uniform rheological control of large size profiles, large centrifugal casting ring and ring rolling, and plate welding. Innovative achievements, with international advanced level, include large size special high quality magnesium alloy ingot(diameter of 800 mm); large hollow thin-walled special magnesium alloy profiles(cross section width of 502 mm, height 60 mm, wall thickness 2-3.5 mm; Successful preparation of high quality of wide magnesium alloy plate(width more than 2000 mm); large size of magnesium alloy ring(diameter of 3490 mm); special friction stir welding equipment and process technology for 30mm-deep welding. Project results improve the technical level and international competitiveness of China’s magnesium industry, and makes significant social and economic benefits.

Also attended the meeting Prof. Panfusheng, director of National Engineering Research Center for Magnesium Alloys, director of International Technical Cooperation Section, Chongqing Academy of Science & Technology, and researchers participating in the project.

(Source: National Engineering Research Center for Magnesium Alloys)

Zhengzhou Light Metals Research Institute of Chinalco develops super light magnesium-lithium alloy

Magnesium lithium alloy is by far the lightest metal structure material, about 1.3-1.6 g/cm3 density. Since 1930, through the study of scientific research workers, magnesium lithium alloy has been used in military, aerospace and aviation, and achieved great practical effect. Influenced by external environment, China, since the 1980’s, has begun to study magnesium lithium alloy casting, heat treatment, composite deformation and processing, and made significant achievements.

Researchers from Zhengzhou Light Metals Research Institute of Chinalco have firm understanding of the key technology for magnesium lithium alloy casting and processing. They develop series of different super light magnesium lithium alloy with different density and strength, and the lightest magnesium lithium alloy can float on water.

In March 2010, they realized the industrialization of magnesium lithium alloy, and, for the first time, provided to domestic users with magnesium lithium alloy extrusion and FRP; In May 2012, they successfully manufactured large-sized ingot, and, at the same year in July, successfully magnesium lithium alloy plate, then, in September sheet (width > 350 mm, thickness< 1 mm, can be processed at room temperature) for 3C products; In April 2013, they manufactured large forging (width > 2013 mm). In October 2013, high performance magnesium alloy line, at 100t/a of capacity, comes into production, with its products to over 30 customers at home and abroad.

Output of primary magnesium ended at 795.2kt by Nov. 2014: doubtful data?

Data from China Magnesium Association said that output of primary magnesium, by Nov. 2014, hit 795.2kt, up 10.7% y-on-y, of which Shaanxi amounted to 367.9kt, up 16.38%; Shansi 229.1kt, up 3.9%; Ningxia 85.8kt, down 15.1%; Xinjiang 37.2kt, up 73.7%; Henan 39.5kt, up 6.2%; Jilin 5.3kt, down 33.8%; Sichuan 4.8kt, up 75.4%; Inner Mongolia 4.5kt, up 34%; Qinghai 11.9kt, up 816.45%, and Liaoning 9.1kt, up 38.2%.

However, from the point view of actual magnesium industry, above-mentioned data remain doubtful: actual output in Shaanxi is more than above datum, and Shanxi and Ningxia less than above data, while data for Henan, Liaoning and Jilin should be for other else products rather than for primary magnesium ingot. So, there are omission, redundant accounting and exaggeration for above data. Sunlight Metal believes output in Nov. should be less than above data.

As a result, magnesium industry players should take calm analysis, rather than misjudge market condition, although a brighter prospect lies ahead but the journey is a bit far too difficult.

(Contributed by Mr.Dongchunming, GM of Sunlight Metal)

Export of magnesium products closed in November in China (Unit: t)

<table>
<thead>
<tr>
<th>Item</th>
<th>Magnesium</th>
<th>Other magnesium and alloy</th>
<th>Waste and scrap</th>
<th>Magnesium rapsings/turnings/granules according to size &amp; powders</th>
<th>Magnesium wrought</th>
<th>Magnesium articles</th>
<th>Monthly total</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS code</td>
<td>81041100</td>
<td>81041900</td>
<td>81042000</td>
<td>81043000</td>
<td>81049010</td>
<td>81049020</td>
<td></td>
</tr>
<tr>
<td>Jan.</td>
<td>21732</td>
<td>12595.3</td>
<td>242.4</td>
<td>9304.7</td>
<td>490.1</td>
<td>476.2</td>
<td>44840.7</td>
</tr>
<tr>
<td>Feb.</td>
<td>11844.3</td>
<td>5898.5</td>
<td>209.7</td>
<td>3911</td>
<td>209.8</td>
<td>393.9</td>
<td>22467.2</td>
</tr>
<tr>
<td>Mar.</td>
<td>24607.2</td>
<td>9323.1</td>
<td>447.8</td>
<td>8858.7</td>
<td>512</td>
<td>389.5</td>
<td>44138.3</td>
</tr>
<tr>
<td>Apr.</td>
<td>20023.5</td>
<td>8624</td>
<td>147.9</td>
<td>9074.5</td>
<td>319.8</td>
<td>843.2</td>
<td>38833</td>
</tr>
<tr>
<td>May</td>
<td>16793.5</td>
<td>9041.1</td>
<td>433.7</td>
<td>7373.1</td>
<td>190.3</td>
<td>963.2</td>
<td>34740.9</td>
</tr>
<tr>
<td>Jun</td>
<td>16949.8</td>
<td>10150.8</td>
<td>286.4</td>
<td>7278.9</td>
<td>234.2</td>
<td>819.5</td>
<td>35519.7</td>
</tr>
<tr>
<td>Jul</td>
<td>18445.9</td>
<td>9232</td>
<td>289.9</td>
<td>8862.9</td>
<td>196.9</td>
<td>507.8</td>
<td>35535.5</td>
</tr>
<tr>
<td>Aug.</td>
<td>17975.3</td>
<td>8024.9</td>
<td>113.8</td>
<td>8918.4</td>
<td>373.2</td>
<td>832.5</td>
<td>340379</td>
</tr>
<tr>
<td>Sept.</td>
<td>19593.69</td>
<td>8249.17</td>
<td>0</td>
<td>8720.33</td>
<td>329.1</td>
<td>592.53</td>
<td>35484.81</td>
</tr>
<tr>
<td>Oct.</td>
<td>16674.4</td>
<td>7655</td>
<td>327</td>
<td>8333.8</td>
<td>362.8</td>
<td>560.9</td>
<td>31916.8</td>
</tr>
<tr>
<td>Nov.</td>
<td>18134.2</td>
<td>7210.3</td>
<td>141.8</td>
<td>7389.8</td>
<td>250.2</td>
<td>411.6</td>
<td>35537.6</td>
</tr>
<tr>
<td>Total</td>
<td>202721.9</td>
<td>96040.2</td>
<td>2641.2</td>
<td>90026.1</td>
<td>3468.3</td>
<td>6190.8</td>
<td>391052.5</td>
</tr>
</tbody>
</table>

Magnesium ingot price by Sunlight Metal (unit: yuan/t)

<table>
<thead>
<tr>
<th>Fugu</th>
<th>Wenxi</th>
<th>Taiyuan</th>
<th>Ningxia</th>
<th>FOB(Tianjin) USD/t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug.2</td>
<td>14500-14600</td>
<td>14800-14900</td>
<td>14700-14800</td>
<td>14700-14900</td>
</tr>
<tr>
<td>Aug.9</td>
<td>14500-14600</td>
<td>14800-14900</td>
<td>14700-14800</td>
<td>14700-14900</td>
</tr>
<tr>
<td>Aug.16</td>
<td>14350-14450</td>
<td>14650-14750</td>
<td>14550-14650</td>
<td>14550-14750</td>
</tr>
<tr>
<td>Aug.23</td>
<td>14350-14450</td>
<td>14650-14750</td>
<td>14550-14650</td>
<td>14550-14750</td>
</tr>
<tr>
<td>Aug.30</td>
<td>14350-14450</td>
<td>14650-14750</td>
<td>14550-14650</td>
<td>14550-14750</td>
</tr>
<tr>
<td>Sept.6</td>
<td>14350-14450</td>
<td>14650-14750</td>
<td>14550-14650</td>
<td>14550-14750</td>
</tr>
<tr>
<td>Sept. 13</td>
<td>14350-14450</td>
<td>14650-14750</td>
<td>14550-14650</td>
<td>14550-14750</td>
</tr>
<tr>
<td>Sept. 20</td>
<td>14350-14450</td>
<td>14650-14750</td>
<td>14550-14650</td>
<td>14550-14750</td>
</tr>
<tr>
<td>Sept. 27</td>
<td>14350-14400</td>
<td>14650-14700</td>
<td>14550-14600</td>
<td>14550-14700</td>
</tr>
</tbody>
</table>
Sunlight Metal collects and publishes daily ingot quotation and FOB price from key magnesium production regions objectively, independently and systematically. Being taken into account the viewpoints from both supplier and consumers, Sunlight Metal price, rationally reflecting the change in market, is the most authoritative in domestic magnesium sector for 5 years running. For more detail and inquiry, pls. contact us at info@chinamagnesium.net

Industry News

Green implants are coming, and paving the way for implantable WiFi devices

UA StartUp Finishes Second at International Innovation Conference

Magnesium Outlook 2015: Demand to Increase Gradually

UAV controller for iPad and iPhone users

Iran to launch its first magnesium production plant

Mary Barra calls new Bolt a ‘real game changer’ for GM

Eco-friendly electronics of the future will be designed to disappear

Nevada Clean Magnesium Formalizes Process License and Royalties Agreement

Research and Markets: Global Metal Magnesium Industry Report 2015-2020

Panasonic and B/E Aerospace seek to Jazz up economy class

Magellan to provide magnesium, aluminum castings to P&W

CES 2015: Lenovo LaVie Z series brings lightest laptop, hybrid with 13-inch displays

China magnesium output up by 10.7% in first 11 months

First Integrated Light Metal Die Casting Cell Available for Industrial Use

Nevada Clean Magnesium Renegotiates Investment Changes to Joint Venture with ScanMag AS

China scraps quotas on rare earths after WTO complaint

Upcoming Events

Visit the Events and Industry Calendar for upcoming event registration and program details, and watch for email alerts for the latest information!

###