

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@intlomag.org.

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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*
- Alan Clark, CM Group, *Global Magnesium Supply Demand Balance in 2014*
- 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!

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 or click [here](#).

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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.

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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 (HZG, 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.

The Helmholtz-Zentrum Geesthacht, a member of the Helmholtz Association of German Research Centres, currently has 900 employees at its locations in Geesthacht and Teltow. The research work is organized according to the following Helmholtz programme areas: Advanced Engineering Materials, Water and Climate in Coastal Areas, Regenerative Medicine, and Research with Neutrons and Synchrotron Radiation. For several years now, research on magnesium and its alloys has been performed in the Institute of Materials Research, within the framework of a programme aimed at the development of novel lightweight structural materials. In the recent years a unique research platform was built, the "Magnesium Innovation Centre MagIC", which enables to centralise and extend the capabilities with the Institute in the development, processing, testing and characterisation of magnesium alloys as well as in the development of enabling technologies such as welding and coating.

The final deadline for applications is **30th March, 2015**.

The presentation of the award will take place at the banquet of the 10th International Conference of Mg Alloys and Their Applications, 11-16 October, 2015 in Jeju, South Korea.

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.

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December Magnesium Review from Metal-Pages

The US magnesium market continues to retreat in early 2015 trading as demand fails to show signs of life and securing higher prices becomes unachievable. Business activity on the magnesium spot market has yet to be lifted out of the doldrums that plagued the industry heading towards the end of last year as consumers ran down inventories for accounting purposes.

It comes as trade sources report that the lack of buying is making it hard to achieve sales towards the top end of the price range.

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.

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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 SELFIE" 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

locking mechanism" which utilizes a Velbon's original direct contact pipe without screw fastening. Since the pedestal is made of magnesium, it is light and easy to carry even when it is stretched out. It has superior strength, dimensional stability, and vibration damping property, and it enables stable photographing.

Kita-daito-jima (Kita-daito Island) enters the "dolomite world" by blending the dolomite into mineral soaps

(Source: Ryukyu Shimpo 12th Oct., 2014)

Ecomap, a company producing cosmetics based at Naha City, developed face soaps "Dolomite Soap" utilizing the mineral "dolomite" including calcium and magnesium existing in Kita-daito-jima. The business is the joint enterprise with Kita-daito-son (Kita-daito village), and it is the first cosmetic in Okinawa prefecture in which the dolomite is utilized. "Dolomite Soap" gathers and absorbs pore-clogging dirt and old keratin. The company has started to sell it from 13th October, and plans to put it on the international market.

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

(Source: LM Tsushin 17th Oct., 2014)

Kinomoto 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. Kinomoto 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 purchases 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

(Source: Kumanichi.com 23rd Oct., 2014)

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.

Oricon Energy received a patent on a magnesium fuel cell

(Source: Kankyo-business on line, 2nd Nov., 2014)

Oricon Energy (one of the consolidated subsidiaries of Oricon Inc.), Tohoku University and the National Institute of Advanced Industrial Science and Technology announced that they had received a patent on a magnesium fuel cell as of 17th October, 2014. This is one of the base patents in putting the magnesium fuel cell into practical use. Oricon Energy grants exclusive license of this patent to "S to M company", based at Miyazaki Prefecture, with which Oricon Energy formed a capital alliance.

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

(Source: September issue of Import/Export Statistics (customs clearance basis) of METI - Compiled by The Japan Magnesium Association)

Import

Based on Import/Export Statistics of September 2014, the magnesium metal import was 2,615.5 tons (29.5% increase from the same month the year before), 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).

The breakdown of the metal category was that the pure magnesium was 2,221.4 tons (44.4% increase on a year-to-year basis), the die-casting use was 386.1tons (19.2% decrease), and the casting alloys was 8.0tons (180.3% increase). Although the pure magnesium which had decreased in the previous month showed large increase again, the decreasing trend of the die-casting alloys continued. It seems to take a little more time to attain a stable growth.

In September, the import price of the pure magnesium was 266.1 yen/kg, which indicated 10 yen/kg increase, 3.9% increase 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.

Export

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.

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).

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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

Chongqing Academy of Science & Technology. The experts, following the report about research and funds usage, concluded that the project completed the specification stipulated in research content and assessment indicators, and agreed its examination and acceptance.

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 phase I facility, with 13000 m² of standard workshop and 50 mln. yuan of investment, has the capacity 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.

Phase I technological upgrading project by Tianyu Magnesium came through examination and acceptance

On November 24, technological transformation project with annual capacity of 20000 tons of magnesium and magnesium alloy processing carried out by Tianyu Magnesium, came through acceptance.

The project includes phase I and phase II facilities. Phase I project includes 10kt/a of magnesium alloy line and reduction tank workshop, and phase II project 10kt/a of magnesium alloy die casting and profiles as deep processing products. Following the completion of phase I project, phase II project will start construction with 2 years of period. Phase I project, with 38.5 mln. yuan of total investment, is equipped with 6 regenerative refining furnaces, 2 resistance furnaces, 2 sets of W100 continuous casting systems, and 2 sets of 5T metallurgical cranes.

At present, phase I project, up to design requirements with operation stability, has been on stream. Following its acceptance, Tianyu Magnesium will receive 80% of support fund from foreign trade and economic cooperation program (2014) in Shaanxi province and remaining 20% will be allocated after final acceptance by early next year.

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. 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.

Technical roadmap of magnesium industry in Hebi

On December 30, press meeting of technical roadmap of magnesium industry in Hebi was kicked off. Presented during the meeting the experts and scholars from magnesium industry, and managerial persons from related department and key magnesium enterprises.

Magnesium deep-processing industry in Hebi is one of two new leading industries emphasized by both municipal party committee and municipal government. Technology roadmap, about technological development prospect and realization method and the description of the development path, plays service and guiding role in the 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.

The research is highly appreciated by Mr.Wuxiuming, former President of China Magnesium Association and now chief industry senior adviser, and participating experts and scholars.

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 cuts 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 apologizes for the inconvenience to customer.

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 analyzers said that, in the current downturn conditions, to cut down production is a wise choice.

Prof. Panfusheng from National Engineering Research Center for Magnesium Alloys was elected as national excellent worker for science and technology

Commendation conference of the sixth national excellent science and technology worker was held on December 15, 2014 in Beijing. Prof. Panfusheng, from National Engineering Research Center for Magnesium Alloys, was honored as national excellent worker for science and technology.

National excellent workers for science and technology was set up by China Association for Science and Technology in 1997, and elected once every two years. National excellent workers for science and technology was awarded only once but for a lifelong honor. Selected persons are mainly from science and technology sectors, dedicated to science and technology research and making significant achievements and outstanding contributions to science and technology.

Prof. Panfusheng, who, for a long time, engages in magnesium alloy and aluminum alloy research and engineering work, makes a number of important scientific and technological achievements including the 2-phase control of light alloy, R & D of new materials, technology and application of magnesium alloy and aluminum alloy. Prof. Pan is chief editor of Elsevier publisher Journal of Magnesium and Alloys; director of Chongqing Academy of Science & Technology; president of Magnesium Alloy Department, Chinese Materials Research Society, and president of Chongqing Material Association. Prof. Pan is responsible for creating the national key discipline of material science in Chongqing University and National Engineering Research Center for Magnesium Alloys. Prof. Pan publishes over 300 articles in key journals at home and abroad, authored 9 books, patented over 60 inventions, and mapped out 8 national and industry standards.

(Source: National Engineering Research Center for Magnesium Alloys)

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

Large-sized magnesium alloy production, welding and equipment project led by National Engineering Research Center for Magnesium Alloys came through examination and acceptance during Nov. 12, 2014, with excellent grades.

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, Wenxi Yingguang 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 prof. Panxiaodong 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 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%; Shanxi 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%.

As shown above, output of primary magnesium, by Nov. 2014, still maintained its uptrend, even though magnesium price slumped to the lowest in the past 8 years. Primary magnesium producers still keep their facilities running as scheduled, in which Shaanxi grew substantially, followed by Shanxi, then Xinjiang, Henan, Sichuan, Inner Mongolia, Qinghai and Liaoning, but Ningxia saw negative growth.

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.

On the other hand, growth rate for primary magnesium output, from the point view of market, should be equal or less than 10%. Firstly, export, from Jan. to Nov. 2014, hit 391kt, up 5%; secondly, output of sponge titanium dropped by 9.4% from Jan. to Nov. y-on-y, and aluminum increased only by 8%; thirdly, outputs for both steel desulphurization magnesium powder and 3C-oriented magnesium alloy declined, too. Magnesium alloy, for railway industry, showed no obvious growth in terms of output, even it may be lucky enough not to drop down.

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)

Item	Magnesium unwrought (min.99.8%)	Other magnesium and alloy unwrought	Waste and scrap	Magnesium raspings/turnings/granules according to size & powders	Magnesium wrought	Magnesium articles	Monthly total
HS code	81041100	81041900	81042000	81043000	81049010	81049020	
Jan.	21732	12595.3	242.4	9304.7	490.1	476.2	44840.7
Feb.	11844.3	5898.5	209.7	3911	209.8	393.9	22467.2
Mar.	24607.2	9323.1	447.8	8858.7	512	389.5	44138.3
Apr.	20023.5	8624	147.9	9074.5	319.8	643.2	38833
May	16793.5	9041.1	433.7	7373.1	190.3	963.2	34740.9
Jun	16949.8	10150.8	286.4	7278.9	234.2	619.5	35519.7
Jul	18445.9	9232	289.9	6862.9	196.9	507.8	35535.5
Aug.	17975.3	8024.9	113.8	6918.4	373.2	632.5	340378
Sept.	19593.69	8249.17	0	6720.33	329.1	592.53	35484.81
Oct.	16676.4	7655	327	6333.8	362.8	560.9	31916.8
Nov.	18134.2	7210.3	141.6	7389.8	250.2	411.6	33537.6
Total	202721.9	96004.2	2641.2	80026.1	3468.3	6190.8	391052.5

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

	Fugu	Wenxi	Taiyuan	Ningxia	FOB(Tianjin) USD/t
Aug.2	14500-14600	14800-14900	14700-14800	14700-14900	2490/2560
Aug.9	14500-14600	14800-14900	14700-14800	14700-14900	2490/2560
Aug.16	14350-14450	14650-14750	14550-14650	14550-14750	2480/2550
Aug.23	14350-14450	14650-14750	14550-14650	14550-14750	2480/2550
Aug.30	14350-14450	14650-14750	14550-14650	14550-14750	2480/2550
Sept.6	14350-14450	14650-14750	14550-14650	14550-14750	2480/2550
Sept. 13	14350-14450	14650-14750	14550-14650	14550-14750	2480/2580
Sept. 20	14350-14450	14650-14750	14550-14650	14550-14750	2480/2580
Sept. 27	14350-14400	14650-14700	14550-14600	14550-14700	1460-2530

Oct. 4	14350-14400	14650-14700	14550-14600	14550-14700	2460/2530
Oct. 11	14300-14400	14600-14700	14500-14600	14500-14700	2460/2530
Oct. 18	14250-14350	14550-14650	14450-14550	14450-14650	2450/2520
Oct. 25	14100-14200	14400-14500	14300-14400	14300-14500	2430/2480
Nov. 1	14000-14100	14300-14400	14200-14300	14200-14400	2430/2480
Nov. 8	13900-14000	14200-14300	14100-14200	14100-14300	2430/2460
Nov. 15	13600-13700	13900-14000	13800-13900	13800-14000	2420/2450
Nov. 22	13300-13500	13600-13800	13500-13700	13500-13800	2420/2450
Nov. 28	13200-13400	13500-13700	13400-13600	13500-13700	2400/2430
Dec. 6	13300-13400	13600-13700	13500-13600	13500-13700	2400/2430
Dec. 13	13300-13400	13600-13700	13500-13600	13500-13700	2400/2430
Dec. 20	13300-13400	13600-13700	13500-13600	13500-13700	2400/2430
Dec. 27	13300-13400	13600-13700	13500-13600	13500-13700	2400/2430
Jan. 3, 2015	13250-13350	13550-13650	13450-13550	13450-13650	2400/2430

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

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1000 Westgate Drive, Suite 252, Saint Paul, Minnesota 55114 USA

Phone: +1 651-379-7305 | Fax: 1 651-290-2266 | Email: info@intlimg.org

