



IMA News

September 11, 2013

Issue: 06

IMA Executive Committee:

Karl Kainer	ima.magnesium@hzg.de	Nic Andrews	nic.andrews@magontec.com
Ronald Chang	c.j.chang@foxconn.com	Jan Guy	JGuy@amacor.us
Tom Heider	tomh@tcdcinc.com	Anthony LoCoco	tlococo@cwmtl.com
Walter Treiber	wtreiber@cwmtl.com		
Ken White	ken.white@magnesium-elektron.com		

Below are articles and summaries of **magnesium** related stories. IMA Member companies are asked to distribute the update to their employees and if their employees wish to receive the monthly IMA News issues, please send their email addresses to the IMA World Headquarters. The IMA appreciates all member company press releases and announcements for inclusion in the monthly IMA News issues.

INDUSTRY CALENDAR

IMA Events

October 28 – 29, 2013

[IMA North American Applications Seminar](#)

BuhlerPrince, Inc.
Holland, Michigan, USA

December 5, 2013

[IMA European Health & Safety Seminar](#)

Leonardo Hotel Köln
Cologne, Germany

June 1 – 3, 2014

[IMA 71st Annual World Magnesium Conference](#)

Westin Grand
Munich, Germany

Industry Events

October 6 – 8, 2013

[5th Asian Symposium on Magnesium Alloys](#)

Toki Messe
Niigata, Japan

November 10 – 12, 2013

[FASA Congress](#)

Barcelona, Spain

February 6 – 10, 2014

[TMS 2014 143rd Annual Meeting & Exhibition](#)

San Diego Convention Center
San Diego, California, USA

Contact IMA

Mike Schultze, Executive Vice President

E-mail: mschultze@tso.net

Ann Scheible, Director Member Services

E-mail: ascheible@tso.net

IMA staff can also be reached at:
International Magnesium Association
1000 N. Rand Road, Suite 214
Wauconda, IL 60084 USA
Tel: ++1-847-526-2010
Fax: ++1-847-526-3993
E-mail: info@intlomag.org
Website: www.intlomag.org

Asian Director: Shanel Tsai
IMA Asia Representative Office
7F No.12-2 Alley 658 Jinzhong Road
Changning District
Shanghai, China 200335
Phone: +86 (21) 6402 2930
Email : shanel@intlomag.org.cn

European Director: Christian Payn
IMA European Representative
343 Chemin de Durban
84190 beaumes de Venise
France
Phone: +33 (0)6 79 91 44 37
Email: Christian.payn@gmail.com

ASSOCIATION NEWS

IMA North America Magnesium Applications Seminar & Exhibits

- [Registration Open!](#)
- [Exhibitor Opportunities!](#)

IMA Announces Life Cycle Assessment of Magnesium Components in Vehicle Construction – [Executive Summary Now Available](#)

Join U.S. for the 71st Annual World Magnesium Conference in Munich, Germany – [Save the Date!](#)

For IMA Members Only! A New Email Series: "Did You Know?"

IMA Announces Newly Designed Website Release

[Articles follow below](#)

INDUSTRY NEWS

September Magnesium Review from Metal-Pages

'Poisoning' Corrosion Brings Stainless Magnesium Closer

Alliance Magnesium Granted Interlinked an Exclusive Interview during Recent FSXinterlinked Investment Conference

China's Century Sunshine to Lift Magnesium Ingot, Alloy Output by 56% in 2013

Chinese Magnesium Alloy Ingots are Making a Strong Rally

Next Toyota Prius Will Get Better Fuel Economy

[Articles follows below](#)

EDITOR'S NOTE: IMA makes every possible effort to substantiate the articles which appear in the Update. However, as this is not always possible IMA does not warrant the details nor accuracy of any given article. Please keep in mind that materials are attained through press releases, outside articles from numerous sources and publications. Such materials often contain opinions which are not that of the association nor should they be construed as such. We realize that in the case of some materials, the translations might often lead to less than perfect grammar, etc. It is our position however to print as submitted rather than take upon ourselves the editing of such materials which would entail potential changes unwanted by any given author.

ASSOCIATION NEWS

IMA North America Magnesium Applications Seminar & Exhibits *Registration Open!*

The International Magnesium Association (IMA) and its North America Committee Chair, Mr. Tom Heider, are pleased to announce that it will again offer its Magnesium Applications Seminar & Exhibits to be held on Tuesday, October 29, 2012 at the facilities of long-time IMA member, BuhlerPrince, Inc., in Holland, Michigan, USA. There will also be an optional BuhlerPrince, Inc., plant tour on Monday, October 28. Please save the dates on your calendar!

The Magnesium Applications Seminar was established to educate participants about the versatility of this lightweight alloy. This year's agenda offers a global perspective of **magnesium's** application within multiple industries, along with an analysis of current research and trends. At the event, there will also be opportunity to collaborate with professionals in the industry, and visit the exhibit hall to speak directly with recyclers, foundries, and fabricators of **magnesium** products.

This seminar is FREE to attend. **Magnesium** topics tentatively included are relative to:

- Applications
- Technology
- Productivity
- Quality
- Green
- Support and Research Presentations

On behalf of Tom Heider and the IMA North America Committee, we hope you are able to take advantage of this comprehensive and FREE opportunity! Additional details regarding [attending](#) and [exhibiting](#) are available at www.IMAseminar.org.

Exhibitor Opportunities!

Don't miss this once-a-year opportunity, open to all IMA members and non-members, to exhibit at IMA's Magnesium Applications Seminar North America in Holland, Michigan, USA. This seminar, now in its 22nd year, provides an opportunity like no other to reach a targeted audience of engineers and designers, including structural design engineers.

Exhibitors will have the opportunity to meet with attendees during a continental breakfast time, a morning break, lunch, an afternoon break and at the end of the day. This set up will also give exhibitors the opportunity to attend the seminar sessions with the convenience of sitting right at their booth!

The IMA Thanks our 2013 Magnesium Applications Seminar Exhibitors!

**Chicago
White Metal
Casting, Inc.** 

**TWIN CITY
DIE CASTINGS CO.**
Since 1919

IMA Announces Life Cycle Assessment of Magnesium Components in Vehicle Construction – *Executive Summary Now Available*

The [Executive Summary](http://www.intlmag.org/assets/pdfs/2013IMA_LCAStudy_Summary.pdf) (http://www.intlmag.org/assets/pdfs/2013IMA_LCAStudy_Summary.pdf) of the IMA's Life Cycle Assessment of Magnesium Components in Vehicle Construction is now available in the member's only section of the IMA website. The Executive Summary presents the main results of the study and includes sections on:

- 1) The IMA LCA Study
- 2) Goal and Scope
- 3) Analysis of Primary **Magnesium** Production
 - Pigeon Process
 - Electrolysis
- 4) Analysis of **Magnesium** Parts Manufacturing
 - **Magnesium** Steering Wheel (Die Casting)
 - **Magnesium** Aircraft Parts (Sand Casting)
- 5) Analysis of End of Life and Recycling
- 6) Comparison of **Magnesium** and Aluminum Components
 - Analysis of the Life Cycle of a Steering Wheel
 - Analysis of the Life Cycle of Components for Aircrafts
- 7) Conclusions

The study intends to provide up-to-date and reliable data and results on **magnesium** production, processing and the end-of-life of **magnesium** car components. In general, for the core processes of **magnesium** production, processing and end-of-life, primary data from various sources has been used.

The full report will be available to all IMA Members in late September 2013 in the members only section of the IMA website at <http://www.intlmag.org/membersonly/membersonly.html>. If you need the new members only password, please email Ann Scheible at info@intlmag.org.

Join U.S. for the 71st Annual World Magnesium Conference in Munich, Germany – *Save the Date!*

The World Magnesium Conference is scheduled for June 1 – 3, 2014. This event is the premier international **magnesium** industry conference that highlights the latest technological advances, innovative applications, and emerging developments in the global marketplace. The conference combines informative technical sessions, exhibits, networking and social opportunities for a well-rounded industry experience.

- Industry Updates
- Technical Program, provides a wealth of information for **magnesium** industry professionals and addresses topics ranging from an overview of the current state of the **magnesium** industry to **magnesium** process breakthroughs, applications, and business management issues.
- Social Program
- Exhibit Showcase and Sponsorship Opportunities
- Awards of Excellence, IMA's competition recognizing outstanding **magnesium** products and innovative manufacturing technologies
- International Environmental Responsibility Awards
- IMA Annual Membership Meeting
- Spouse Program

Munich is, "a city of contradictions that somehow create an intriguing blend of old and new; Lederhosen and the latest designer outfits, traditional beer gardens and stylish clubs, historical buildings and the most modern architecture - all stand proudly side by side."

But Munich is not only the capital of Bavaria, it is home to the world's largest festival "Oktoberfest," Bayern Munich and BMW. Discover this pulsing city, and beyond, offering treats such as:

- A city of culture, Munich offers about 40 theatres or smaller stages, 50 museums and collections, different opera houses, old buildings like the 500-year old church "Frauenkirche", the Marienplatz with the new Neo-Gothic Town Hall and famous parks like the English Garden and the Olympic Park.
- Outside Munich, on the way to the Alps, there are plenty of beautiful lakes and castles just waiting to be discovered, among them the fairytale castle "Neuschwanstein."
- Find out more about the medieval cities of Nuremberg and Augsburg, Roman architectural ruins in Regensburg and Passau, the salt mines in Berchtesgaden and the majesty of the Zugspitze, Germany's highest peak near Garmisch-Partenkirchen.

Munich is unique in combining modernity with tradition. Please mark your calendar and watch for upcoming details at www.IMAworldconference.org!

For IMA Members Only! A New Email Series: "Did You Know?"

Also known as "DYK?", the IMA has kicked off a new series of emails asking, "Did You Know?" which provides timely and relevant information about YOUR IMA membership!

This new "buzz" campaign for IMA members is designed to highlight member benefits and encourage word-of-mouth discussion about the IMA. If you or a colleague have any "peer tips" you would like to contribute, please email Ann Scheible at the IMA World Headquarters at info@intlomag.org.

IMA Announces Newly Designed Website Release

The IMA is pleased to announce that we will be launching our new and improved website in the fourth (4th) quarter of 2013. The new website will include updated **magnesium**-specific information relevant to the industry and end-users, as well as website enhancements, including an improved *Buyers' Guide* section with expanded member detail. In addition, the website will feature a more appealing design with easy-to-use navigation providing a better overall user experience.

As part of the redesign, we will be updating the website with images showcasing the uses and advantages of **magnesium**.

If your company has any images that showcase the uses and advantages of **magnesium** which you are willing and able to have posted on the IMA website, please let U.S.know. We will give your company credit on the website for photo use. The categories for which we need images include:

- Magnesium Raw Materials
- Magnesium Primary Production
- Magnesium Alloys
- Magnesium Fabrication & Finishing
- Magnesium Applications
- Magnesium Projects
- Sustainability

Thank you in advance for any image contributions your company can provide.

If you have any questions, please do not hesitate to contact the IMA World Headquarters at info@intlomag.org.

INDUSTRY NEWS

September Magnesium Review from Metal-Pages

The U.S. **magnesium** price spread has narrowed as offers for cheaper overseas metal dry up, while demand remains flat, according to trade sources. Although there has been limited trading, near-by availability of material has tighten up slightly due to a lack of cheaper overseas material being brought in from countries like Russia and Kazakhstan.

It comes as sole U.S. domestic producer U.S. Magnesium Corp, based in Salt Lake City, Utah, and exporter Dead Sea Magnesium in Israel remain well sold under contract and are holding offers in the U.S. at the higher end of the range. The U.S. price for pure **magnesium** min 99.9% has tightened to a range of \$1.95-2.20/lb delivered from a previous level of \$1.85-2.20/lb delivered, while secondary 90/10 **magnesium** is stuck in a range of \$1.70-1.80/lb delivered.

"You can't find material at those lower numbers anymore. Most of that metal has been bought up and there's not much coming in at the moment, probably because prices are still fairly low," said one trader. "Business is slow and it's still the summer. We could see a bit more activity for fourth quarter delivery."

Business activity in the spot market remains lacklustre due to the traditional summer slowdown, but traders said that some consumers may need to cover their requirements for the final quarter of the year, while underlying demand remains robust due to strong volumes into the automotive end-user market. "There's not been many enquiries. But there could be some quarterly business though. I know there are a couple of consumers in North America that haven't covered yet," said another trader. "Prices in China have shot up recently on the back of coke prices and energy costs."

Meanwhile, a deal to combine Norway's Norsk Hydro's aluminium extruded products division and Orkla's Sapa into a 50/50 joint venture has been completed.

The two companies announced that the deal to combine their respective profiles, building systems and tubing operations into a joint venture was established on September 1.

The Chinese **magnesium** metal market has continued on the downward track in the past two weeks as producers offload stocks. Prices of **magnesium** metal 99.9% grade have fallen from RMB16,400-16,700/tonne to RMB15,600-16,100/tonne in the past week. "Producers have finished equipment maintenance and production has recovered, so supply is ample," a trader from Gansu said. Chinese **magnesium** metal producers usually do annual equipment check in summer owing to hot weather, and production is affected as a result.

"Producers are eager to sell, and some producers have started to accept prices as low as RMB15,700/tonne about RMB200/tonne lower than Sunday," he said. A producer source in Shanxi has cut prices to RMB15,900/tonne from RMB16,400/tonne last week to generate sales. "But buyers are opting to watch prices dropping," he noted, adding that he is willing to accept lower prices with cash payment.

Export prices have been pulled down by weaker domestic prices to \$2,640-2,700/tonne FOB, down from \$2,740-2,800/tonne FOB two weeks ago. "Enquiries have increased after the summer break, but most of them are testing the water. Overseas buyers are waiting for lower prices," a trader from Shanghai said.

For the latest **magnesium** news and prices visit www.metal-pages.com, and to subscribe at the special IMA membership rate mail U.S. at info@metal-pages.com.

'Poisoning' Corrosion Brings Stainless Magnesium Closer

In a discovery that could have major implications for the aerospace, automotive and electronics industries, scientists have found a way to dramatically reduce the corrosion rate of lightweight wonder metal **magnesium**: adding arsenic. Weighing in at two thirds less than aluminium, **magnesium** is the lightest structural metal. It has many potential industrial applications, but uptake is severely restricted by its poor resistance to corrosion. Identification of methods to restrict **magnesium** corrosion is the first step in engineering such technology into functional alloys.

For the first time, a group of researchers, led by Monash University's Associate Professor Nick Birbilis, have created a **magnesium** alloy with significantly reduced corrosion rates by adding a cathodic poison -- arsenic.

They found that the addition of very low levels of arsenic to **magnesium** retards the corrosion reaction by effectively 'poisoning' the reaction before it completes.

Once **magnesium** is available in a more stainless, or corrosion-resistant, form wider use will lead to significant weight and energy savings in transportation industries. It has been the subject of significant research efforts concentrating on developing light metals.

Associate Professor Birbilis, of the Monash Department of Materials Engineering, said the discovery would contribute to the birth of more stainless **magnesium** products by exploiting cathodic poisons.

"This is a very important and timely finding. In an era of light-weighting for energy and emissions reductions, there is a great demand for **magnesium** alloys in everything from portable electronics to air and land transportation," Associate Professor Birbilis said.

"**Magnesium** products are rapidly evolving to meet the demands of industry, but presently are hindered by high corrosion rates. The arsenic effect we discovered is now being trialed as a functional additive to existing commercial alloys.

"Our breakthrough will help develop the next generation of **magnesium** products, which must be more stainless."

Source: www.esncenews.com (19-Aug-2013)

Alliance Magnesium Granted Interlinked an Exclusive Interview during Recent FSXinterlinked Investment Conference

At the recent FSXinterlinked Investment Conference, Florida, Alliance Magnesium's President and CEO, Dr. Joel Fournier, granted an exclusive interview for the FSXinterlinked channel on InterlinkedTV.

Alliance Magnesium has developed a patented electrolysis clean tech technology for the production of **magnesium** metal (Mg).

Alliance Magnesium intends to benefit from the increasing demand for metallic **magnesium** (Mg) and alloys, especially from the automotive and aeronautic industries. These industries face significant challenges in terms of reducing the weight of vehicles and equipment controlled by mandatory goals to reduce the production of greenhouse gases. Alliance Magnesium intends to produce a sustainable material, using hydroelectricity as a clean energy source and recovering metal from tailings, returning very little residue or effluents at the end of the process.

During the interview Mr. Fournier explained that **magnesium** is a commodity. He elaborated that it is a metal that has many applications, for example in the automotive industry, adding that **magnesium** is not a pure commodity, but a specialty metal.

Alliance currently has a source for **magnesium** will start making it in the future. "We have developed a new process to develop this metal at very low cost and are looking to start our first production facility in Quebec."

The full interview is available on the FSXinterlinked channel on InterlinkedTV and more information is available at [Alliance Magnesium](http://AllianceMagnesium.com)'s website.

Source: www.prweb.com (26-Aug-2013)

China's Century Sunshine to Lift Magnesium Ingot, Alloy Output by 56% in 2013

China's Century Sunshine expects to raise its 2014 production of **magnesium** ingot and alloy by 56% to 25,000 mt, from an estimated 16,000 mt this year, due to capacity additions at its smelter in Baishan, northern Jilin province, the producer said August 2.

The company's production consists of basic **magnesium** products -- ingot and general alloys -- as well as rare earth **magnesium** alloy.

"The higher output next year is due to our technical enhancement, which will lift our capacity to 25,000 mt/year by the end of Q1 2014, from 16,000 mt/year now," said Noelle Hon, the company's vice president of investor relations, said.

"For this year, our basic **magnesium** product and rare earth **magnesium** alloy ratio is 60:40. Next year, we are targeting [a ratio of] 50:50," she said, noting that the company wants to raise its output of higher value-added alloy products in line with the Chinese government's plans to promote the use of more environmentally friendly, lighter, high-end **magnesium** alloy material during the 12th Five-Year Plan period (2011-2015).

Meanwhile, despite China having scrapped the 10% export tax on **magnesium** on January 1, 2013, the company will sell 100% of its **magnesium** ingot and alloy products in the mainland Chinese market this year.

"Order placing is made in the beginning of each year and 2013 output has already been sold out earlier this year, so we haven't any extra for exports," Hon said.

Since its establishment in 2008, the company has focused on domestic sales, with the three northern Chinese provinces of Jilin, Liaoning and Heilongjiang having accounted for around 80% of its total sales in China, according to Hon.

Century Sunshine said it is one of the few integrated **magnesium** producers in mainland China which has dolomite mining operations.

"Producing one metric ton of **magnesium** ingot will need 11 mt dolomites, so we have plenty of material for use in the years to come," she said, adding that the mine, which started up in H2 2011, has estimated dolomite resources of 23 million mt.

In December 2012, Century Sunshine CEO Chi Wen Fu told Hong Kong media that the company's ownership of dolomite resources in Jilin assured it stable raw material, better monitoring of costs, and transport cost savings of over 10% as both the mine and smelter are located in Baishan.

Source: www.chinamining.org (06-Aug-2013)

Chinese Magnesium Alloy Ingots are Making a Strong Rally

Chinese **magnesium** alloy ingots are making a strong rally. The export price for Japan in last week was 2,720-2,740 dollars per ton, it rose by 180-200 dollars for 10 days. Though the price has been in a falling trend so far, and because producers are reluctant to sell the stocks, a lot of purchasers make hasty purchases. It remains unclear if the prices will rise again due to the excess of supply and slumping domestic demand and export.

Source: www.japanmetabulletin.com (14-Aug-2013)

Next Toyota Prius Will Get Better Fuel Economy

The next Toyota Prius will get "significantly better fuel economy in a more compact package that is lighter weight and lower cost," the Prius program's chief engineer said.

"The performance of this next generation of powertrains will reflect significant advances in battery, electric motor and gas engine technologies," Toyota managing officer Satoshi Ogiso said at a company hybrid vehicle event outside Detroit.

Toyota has earned the mantle as the world's greenest automaker, thanks to the success of its hybrid vehicles like the Prius. The second generation of the Prius was introduced in 2003 and the next redesign came out six years later. Toyota has sold more than 5 million hybrid vehicles globally since the launch of the Prius.

While the hybrid components will be shrunk in the next-generation Prius, the size and interior packaging of the vehicle itself is not getting smaller, Ogiso said.

As for fuel economy, Toyota is looking at improving its current 4.7 liters per 100km (50 mpg U.S./60 mpg UK) to near 4.2 liters per 100km (55 mpg U.S./66 mpg UK), although Ogiso equated improving Prius fuel economy by 10 percent to that of Usain Bolt shaving a full second off the world-record 100-meter dash.

Although Ogiso declined to confirm launch timing, he said Prius cycles have traditionally have been six years long -- which would make for a 2015 launch.

While he declined to discuss future product plans, Ogiso said the Prius family does not necessarily need to expand further than it already has. Toyota added the larger Prius V in 2011 and the smaller Prius C last year, as well as a more expensive Prius Plug-In version.

Ogiso said the next-generation of the plug-in model, which also was introduced last year, will be developed in parallel with the standard hybrid version.

He said Toyota is considering consumer requests for additional all-electric driving range and is developing a new wireless-inductive charging system that would allow consumers to recharge the car's electric battery without a cable. He said Toyota will begin verification of that system next year

Ogiso said the next-generation hybrid batteries will have higher energy density. [Toyota is developing](#) current lithium-ion and nickel-metal-hydride battery technologies, as well as future batteries based on solid-state, lithium-air and **magnesium** chemistries.

The next-generation Prius electric motors will provide more power in a smaller package, while the gasoline engine will be more efficient. The engine will have thermal efficiency above 40 percent, which would make it the world's most efficient, Ogiso said at a global press briefing [here](#).

Ogiso said Toyota will also begin testing in 2014 a wireless battery charging system, without need for a cable, for a future plug-in Prius.

The Prius will be the lead vehicle for Toyota's New Global Architecture platform - to be shared with sister Toyota vehicles from the Corolla to the Camry - with a lower center of gravity and increased structural rigidity, Ogiso said. He did not provide details on the improved interior, ease of operation or additional safety technologies.

Source: www.europe.autonews.com (29-Aug-2013)