

**INTERNATIONAL MAGNESIUM INDUSTRY
CLIMATE & AIR QUALITY PROTECTION WORKSHOP
TAIYUAN, SHANXI, CHINA**

In Cooperation with the IMA 2009 Taiyuan Global Magnesium Conference & Exhibition

Simultaneous Chinese / English Language Interpretation Available

Workshop: April 9, 2009
Conference Dates: April 7 -9, 2009

Location: World Trade Hotel - Taiyuan, Shanxi, China

Sponsors: International Magnesium Association (IMA), China Energy Research Institute (ERI), and the U.S. Environmental Protection Agency (EPA)

Purpose

This newly conceived industry workshop aims to share the latest information on improving energy efficiency, protecting the global climate, and preventing air pollution resulting from magnesium production and casting operations. The magnesium industry in partnership with the national governments of China and the United States is aggressively working to improve process efficiencies and reduce emissions. The workshop format is designed to encourage a free and open exchange of technical information and practical experiences amongst the global magnesium industry, technology suppliers, academia, government, and non-government stakeholders.

Background

China has rapidly grown to become the world's largest producer of magnesium with a total output of greater than 850,000 tonnes in 2006¹. An abundant, light weight, and recyclable structural metal, magnesium is poised to become a "climate-friendly" material. Its light weight and strength are enabling the design and construction of the 21st Century's most fuel efficient vehicles and portable devices. The Pidgeon Process widely used in China to produce primary magnesium is energy intensive and largely powered by coal combustion (see Appendix 1). The China Magnesium Association recently reported its ongoing efforts to implement alternative cleaner and cost-effective energy sources such as coke gas.

Sulfur hexafluoride (SF₆), an extremely strong and long-lived greenhouse gas, is commonly used to protect molten magnesium from burning during both the metal production and parts casting processes. SF₆ has a 100-year global warming potential of 22,800 and atmospheric lifetime of 3,200 years.² IMA and EPA share the goal of eliminating SF₆ emissions from magnesium production and casting process to improve the industry's environmental footprint and sustainability. Information sharing is a driving principle behind EPA's partnership with the

¹ CMA. *64th Annual World Magnesium Conference*, Vancouver, Canada. (May, 2007).

² Intergovernmental Panel on Climate Change (2007).

magnesium industry and allows the industry to identify and implement solutions at the lowest possible cost.

The IMA, ERI, and EPA are working together to address the challenge of global climate change. This public / private partnership between industry and governments strives to elevate climate and air quality protection above the fray of normal industry competition and cooperatively find solutions that benefit the entire industry as well as the global environment.

Proposed Workshop Topics and Speakers

Global Climate Protection Opportunities in Magnesium Production and Casting

Session Moderators – *Kirsten Cappel, U.S. EPA and Jeremy Scharfenberg, ICF International*

9:00 – 9:30

- Introduction to Chinese Pidgeon magnesium production – environmental challenges and energy efficiency opportunities

Speaker TBD, China Nonferrous Metals Industry Association - Tentative

9:30 – 10:00

- Domestic policies promoting climate and air quality protection

Cui Cheng, Deputy Director, Energy Research Institute

10:00 – 10:30

- U.S. EPA & the Magnesium Industry – A Decade of Cooperation for Global Climate Protection

Kirsten Cappel, U.S. Environmental Protection Agency

BREAK – 10:30 – 10:45

10:45 – 11:45

- CDM Project Design and Implementation Support – Panel Discussion
Panelists will present aspects of project design and experience with Magnesium projects

▪ *Caspar Chiquet, South Pole Carbon Asset Management*

▪ *Adi Dishon, EcoTraders*

▪ *Yuebing Lu, Climate Change Capital*

LUNCH BREAK / NETWORKING

11:45 – 12:30

Climate Friendly Technologies and Industry Experiences

Session Moderators – *Kirsten Cappel, U.S. EPA and Jeremy Scharfenberg, ICF International*

12:40 – 1:00

- Substitution of SF₆ in Magnesium Melting and Die-casting

Kam-Shau Chan, Manager, Foxconn Technology Group

1:00 – 1:20

- Advanced Magnesium Melt Protection Delivery
Reggie Ho, President, Polycontrols

1:20 – 1:40

- Magnesium Melt Protection and OFC-1234ze (E)
Fuyuhiko Sakyu, Central Glass

1:40 – 2:00

- Magnesium Melt Protection and AM-Cover
Steve Erickson, AMT

BREAK – 2:00 – 2:15

Estimating and Reporting GHG Emissions – Introduction to and Demonstration of EPA’s Cover Gas Emissions Tracking Tool

2:15 – 3:00

- Introduction to and Demonstration of EPA’s Cover Gas Emissions Tracking Tool
Jeremy Scharfenberg and Maria Chen of ICF International

Foundry Operations and Ambient Air Quality

3:00 – 3:20

- Foundry Operations and Ambient Air Quality
Lon Yan, China Nerin Engineering Company

Closing Remarks

3:20 – 3:40

Kirsten Cappel, U.S. EPA

U.S. EPA Contacts:

Kirsten Cappel, Climate Change Division
Telephone: (202) 343-9552
E-mail: cappel.kirsten@epa.gov

Scott Bartos, Climate Change Division
Telephone: (202) 343-9167
E-mail: bartos.scott@epa.gov