

Mineral Industry Surveys

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MAGNESIUM IN THE SECOND QUARTER 2006

Exports of magnesium from January through May 2006 were about 17% higher than those in the same period of 2005. Magnesium imports through May 2006 were about 22% less than those in the corresponding period of 2005, mainly as a result of a decrease in imports of magnesium alloy from China. Russia (44%), Canada (29%), and Israel (20%) were the principal sources of imported magnesium metal, and Canada (73%) and Israel (12%) were the principal sources of imported alloys.

Quoted magnesium prices are shown in the table at the bottom of the page. The range of U.S. magnesium prices narrowed slightly, and world prices increased.

In July, Norsk Hydro ASA announced that it planned to exit the magnesium business and would try to sell its magnesium plants in Canada, China, and Germany. Norsk Hydro operates a 51,000-metric-ton-per-year (t/yr) primary magnesium plant in Becancour, Quebec, Canada (the largest operating capacity facility in the world); a 15,000-t/yr recycling plant in Xi'an, China; and a 15,000-t/yr recycling facility in Bottrop, Germany. The company also said that it would close these facilities if it could not find a buyer for the plants. Competition from magnesium from China, weak prices, and the rise in energy prices in Canada were cited as some of the reasons for the decision (Yahoo!News, 2006^{§1}). The company had closed its magnesium casthouse operation in Porsgrunn, Norway in June. (The primary magnesium plant in Porsgrunn was closed in 2002, but continued to operate as a 20,000-t/yr recycling and

remelting facility at the site.) According to its 2005 annual report, Norsk Hydro produced about 50,000 metric tons (t) of magnesium at Becancour in 2005. If the magnesium plant in Canada is closed instead of sold, U.S. supplies of magnesium could be tight, particularly those of magnesium alloy. In 2005, Canada supplied 46% of the total U.S. magnesium imports and 61% of the U.S. magnesium alloy imports, most of which came from Norsk Hydro's plant in Becancour. Imports of magnesium from China have just about been eliminated because of the antidumping duties established for pure, alloy, and granule magnesium. Russia and Israel, both of which are significant U.S. magnesium suppliers, may need to become more important sources, although material imported from these countries is mainly pure magnesium, but some alloy has been imported from Israel.

The U.S. International Trade Commission (ITC) instituted reviews of countervailing duties on pure and alloy magnesium from Canada in October 2005 and of the antidumping duty on pure magnesium from China in December 2005. As a result of these reviews, the ITC determined that revocation of the countervailing duties on pure and alloy magnesium from Canada would be unlikely to lead to continuation or recurrence of material injury to an industry in the United States, but that revocation of the antidumping duty on pure magnesium from China would be likely to lead to a recurrence of material injury (U.S. International Trade Commission, 2006). As a result of these determinations, the countervailing duty on magnesium from Canada was revoked as of August 2005.

The U.S. Department of Commerce, International Trade Administration began an administrative review of the

¹References that include a section mark (§) are found in the Internet References Cited section.

	Unit	Beginning of quarter	End of quarter
Metals Week U.S. spot Western	Dollars per pound	\$1.10-\$1.18	\$1.10-\$1.16
Metals Week U.S. spot dealer import	do.	1.09-1.18	1.09-1.15
Metals Week European free market	Dollars per metric ton	1,720-1,800	1,800-1,900
Metal Bulletin European free market	do.	1,720-1,770	1,780-1,840
Metal Bulletin China free market	do.	1,720-1,735	1,800-1,830

antidumping duty on magnesium metal from Russia in June. The time period to be reviewed was October 4, 2004, to March 31, 2006. The final results were expected to be available no later than April 30, 2007 (U.S. Department of Commerce, International Trade Administration, 2006).

Because of the failure to attract sufficient investors to fund its proposed Egyptian Magnesium Co. magnesium plant, Magnesium International Ltd. (MIL) announced that it would curtail spending on the project at the end of the second quarter. Earlier in the quarter, MIL had increased the target capacity at the proposed plant from 88,000 t/yr to 100,000 t/yr, with phase I construction of 54,000 t/yr. The company also had reached a supply agreement with Egyptian Electricity Transmission Co. for electricity at a price less than 2 cents per kilowatt-hour (Magnesium International Ltd., 2006§).

In June, Allegheny Technologies Inc. (ATI) announced that it would build a new titanium sponge facility in Rowley, UT, with a capacity of 10,900 t/yr. ATI projected that initial production would begin in the third quarter of 2008. This titanium expansion would bring ATI's total annual titanium sponge capacity to approximately 18,140 t. ATI previously had announced three titanium sponge capacity increases at its Albany, OR, facility totaling 7,260 t/yr (Allegheny Technologies Inc., 2006§). This additional titanium capacity would provide an increased market for magnesium in sponge production, and the Rowley location is near U.S. Magnesium LLC's primary magnesium plant.

Pennsylvania's Department of Environmental Protection (DEP) filed suit in the Lawrence County Court asking the court to order Reactive Metals and Alloy Corp. (Remacor) (West Pittsburg, PA) to stop accepting deliveries of magnesium scrap. The DEP claims that a fire in August 2005 destroyed all the plant's equipment so that Remacor has not been able to process scrap since the fire and that the stored scrap represented a flammable hazard. The DEP claimed that more than 1,700 t of scrap is stored at the site (Marley, 2006b).

In June, The U.S. Environmental Protection Agency (EPA) began an investigation to determine if Halaco Engineering Co.'s closed secondary magnesium plant in Oxnard, CA, should be labeled a Superfund site. The plant, which closed in 2004 after filing for Chapter 11 bankruptcy protection in 2002, reportedly did not clean up a waste pile 30 to 50 feet tall at the plant site. Preliminary samples collected at the site have shown elevated levels of heavy metals content, and the EPA will continue to collect air, groundwater, sandbar, and soil samples to be tested (Marley, 2006a). The previous owners of Halaco began

operating the MagPro LLC magnesium recycling facility in Camden, TN, earlier in 2006.

Automotive component supplier, Dana Corp., began supplying cylinder-head cover modules to Ford Motor Co. for the 3.0-liter Duratec V-6 engine in the Ford Freestyle, Ford Five Hundred, and Mercury Montego vehicles. The cylinder-head-cover modules are produced using a thermoplastic material, which Dana claims is lighter and delivers significant cost savings when compared to the magnesium cover that it replaces. The company also claims that, like magnesium, the thermoplastic material can be recycled (Burgert, 2006).

South Korean steelmaker POSCO announced it would invest \$25.5 million to build the country's first magnesium sheet plant in Suncheon, South Jeolla Province. The plant is expected to have a production capacity of 3,000 t/yr. An agreement between the company and the provincial government was signed at the end of June, and construction was scheduled to start in August. Production was expected to begin by mid-2007 (Magnesium.com. 2006§).

References Cited

- Burgert, Philip, 2006, Ford switched magnesium covers to plastic: American Metal Market, v. 114, no. 28-1, July 17, p. 7.
- Marley, Michael, 2006a, EPA considering Superfund label for shuttered Halaco smelter: American Metal Market, v. 114, no. 24-2, June 13, p. 8.
- Marley, Michael, 2006b, Remacor hauled to court over magnesium pile: American Metal Market, v. 114, no. 17-4, May 4, p. 9.
- U.S. Department of Commerce, International Trade Administration, 2006, Initiation of antidumping and countervailing duty administrative reviews and request for revocation in part: Federal Register, v. 71, no. 104, May 31, p. 30864-30865.
- U.S. International Trade Commission, 2006, Pure and alloy magnesium from Canada and pure magnesium from China: Federal Register, v. 71, no. 122, June 26, p. 36359.

Internet References Cited

- Allegheny Technologies Inc., 2006 (June 26) Allegheny Technologies announces new premium-grade titanium sponge facility, accessed June 28, 2006, at URL <http://www.investquest.com/iq/a/ati/ne/news/ati062606sponge.htm>.
- Magnesium.com, 2006 (June 14), POSCO to build first magnesium sheet plant in Korea, accessed June 14, 2006, at URL http://www.magnesium.com/w3/news-room/news_open.php?news=2198.
- Magnesium International Ltd., 2006 (July 28), Funding update; quarterly report—Period to 30 June 2006, accessed July 28, 2006, at URL http://www.mgil.com.au/investor/documents/ASXAIM-FundingUpdateQR300606_000.pdf.
- Yahoo!News, 2006 (July 25), Norsk Hydro says seeking to sell magnesium plants, accessed July 26, 2006, at URL http://news.yahoo.com/s/nm/20060725/wl_canada_nm/canada_minerals_norskhydro_becancour_col_1.

TABLE 1
U.S. IMPORTS FOR CONSUMPTION AND EXPORTS OF MAGNESIUM¹

(Metric tons)

	2006					
	2005	January- February	March	April	May	January- May
Imports:						
Metal	28,700	4,980	2,370	2,690	3,260	13,300
Waste and scrap	14,700	2,710	1,550	1,300	1,480	7,040
Alloys (magnesium content)	40,300	5,100 ^r	2,420	1,990	2,640	12,100
Sheet, tubing, ribbons, wire, powder, and other (magnesium content)	1,040	66	84	129	78	358
Total	84,700	12,800	6,430	6,110	7,460	32,800
Exports:						
Metal	732	297	366	182	239	1,080
Waste and scrap	5,630	518	336	300	364	1,520
Alloys (gross weight)	1,200	530	150	162	255	1,100
Sheet, tubing, ribbons, wire, powder, and other (gross weight)	2,080	421	231	259	198	1,110
Total	9,650	1,770	1,080	904	1,060	4,810

^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.