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Mineral Industry Surveys

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MAGNESIUM IN THE FOURTH QUARTER 2007

Total exports of magnesium for 2007 were about 20% higher than those in 2006. Magnesium imports through December 2007 were about 4% less than those for 2006. Israel (54%) and Russia (22%) were the principal sources of imported magnesium metal, and Canada (58%) was the principal source of imported alloys.

Quoted magnesium prices are shown in the table at the bottom of the page. Quoted magnesium prices increased significantly in the fourth quarter because of the uncertainty in supply. From the beginning of 2007, the average U.S. spot Western price increased from $1.40 per pound to $2.25 per pound, and averaged $1.71 per pound for the year. Domestic magnesium prices continued to increase rapidly and reached $2.80 to $3.15 by the end of January 2008. This was the highest price since 1995, when the magnesium price range peaked at $2.19 to $2.35 per pound. Beginning in 2008, Platts Metals Week introduced a new price series—99.8%-pure magnesium, f.o.b. Tianjin, China.

Near the end of January 2008, U.S. Magnesium LLC was beginning to ramp up its 9,000-metric-ton-per-year (t/yr) capacity expansion that was announced in September 2007. The new capacity was expected to be onstream by summer 2008. U.S. Magnesium also announced that it had completed an engineering and cost analysis for an additional expansion of 18,000 t/yr that could be completed by 2010 (McBeth, 2008).

According to U.S. Magnesium, global magnesium demand was expected to increase at a 7.3% compound average annual growth rate from 2007 to 2012, which would result in consumption of more than 1 million metric tons in 2012 compared with 663,000 metric tons (t) in 2007. Of the 663,000 t of consumption in 2007, U.S. Magnesium estimated that about 36% was for aluminum alloying uses; 32% for diecasting applications, primarily in the automotive industry; 16% for iron and steel desulfurization; and the remainder for other applications. Of the 7.3% compound annual growth, growth in the United States was estimated to be about 2% per year; in the rest of the Western world, 3.5% per year; and in China, 20% per year (McBeth, 2008).

The United States Court of International Trade rejected an appeal by Tianjin Magnesium International Co. Ltd. (TMI) that would have prevented the U.S. Department of Commerce, International Trade Administration (ITA) from conducting an antidumping review of TMI's magnesium shipments to the United States for 2006-07. As a result of this decision, ITA can conduct the antidumping review and establish a new dumping margin for TMI. TMI was the only China-based company with a 0% antidumping rate for magnesium. Because of the inclusion of TMI in the antidumping review, which had been scheduled for completion by January 31, 2008, the ITA has extended the review period to April 30 (U.S. Department of Commerce, International Trade Administration, 2008; United States Court of International Trade, 2008).

The ITA also extended the deadline for completion of the antidumping duty administrative review on magnesium metal from Russia. The original deadline of December 31, 2007, was extended to April 29, 2008 (U.S. Department of Commerce, International Trade Administration, 2007).

After the London Metal Exchange (LME) completed its feasibility study to add magnesium to the products traded on the exchange, it decided not to add magnesium to LME-traded metals.

	Unit	Beginning of quarter	End of quarter
Metals Week U.S. spot Western	Dollars per pound	$1.65-$1.75	$2.00-$2.50
Metals Week U.S. spot dealer import	do.	1.65-1.75	1.80-2.30
Metals Week European free market	Dollars per metric ton	2,800-3,000	3,900-4,200
Metal Bulletin European free market	do.	2,980-3,030	4,100-4,500
Metal Bulletin China free market	do.	2,800-2,850	4,200-4,900

On January 11, 2008, magnesium diecaster Lunt Manufacturing Inc. closed its plants in Hampshire and Schaumberg, IL, after 34 years in business citing foreign competition as the reason for the closure. The company had begun laying off workers in December 2007. Lunt Manufacturing produced more than 200 different components, primarily for the automotive industry (McCoppin, 2008).

On December 28, JSC Russian Railways completed a 6-kilometer (km) rail line that bypassed the sinkhole formed by the collapse of Uralkali's Berezniki potash mine in 2006. The new rail line was expected to be used by shippers until a 53-km bypass is completed in 2010. The rail tracks are used to move carnallite produced by JSC Silvinit to VSMPO-AVISMA Corp.'s magnesium-titanium complex. The width of the sinkhole continued to increase by 17 meters in December, but not in the direction of the bypass (Fertilizer Week, 2008).

According to statistics from the China Nonferrous Metals Industry Association, China produced 627,300 t of primary magnesium in 2007 (China Magnesium Industry & Market Bulletin, 2008). The Chinese Government announced that it would impose a 10% export tax on pure magnesium and magnesium alloy beginning on January 1, 2008. China had instituted a 10% export tax on magnesium scrap on June 1, 2007, and this tax was expected to remain at this level throughout 2008 (Platts Metals Week, 2007).

In December, China Direct, Inc. entered into two letters of intent to create two new joint ventures in China to manufacture and distribute magnesium. The first joint venture, Baotou Xinjin Magnesium Co., Ltd., would be 51% owned by China Direct. Baotou Xinjin currently has magnesium production capacity of approximately 7,000 to 8,000 t/yr. China Direct expected to invest $8.5 million to increase the production capacity to 20,000 t/yr by the third quarter of 2008. The second joint venture, Baotou Sanhe Magnesium Co., Ltd., also would be 51% owned by China Direct. China Direct planned to invest $7.5 million to construct a magnesium facility with a production capacity of 20,000 t/yr. China Direct planned to have 12,000 t/yr of this capacity operational by June 2008 and the remaining 8,000 t/yr operational by June 2009 (China Direct, Inc., 2007).

In January, China Direct also announced that its subsidiaries, Jinwei Magnesium Co., Ltd. and Pan Asia Magnesium Co., Ltd., started production at two newly constructed 6,000-t/yr primary magnesium plants. The startups mark the completion of the second stage of construction at Jinwei and Pan Asia, which each have the capacity to produce 12,000 t/yr of magnesium. China Direct also planned to complete the third stage of construction at Pan Asia in March 2008, which would add 6,000 t/yr of capacity, bringing the total annual production capacity at Pan Asia to 18,000 t/yr by the end of first quarter of 2008 (China Direct, Inc., 2008).

Ningxia Huayuan Magnesium Co. Ltd. was planning to expand its primary magnesium production capacity by 24,000 t/yr in two phases. In phase I, the company would build another 12,000 t/yr of new capacity, which was expected to come onstream before June 2008, and the second phase of 12,000 t/yr was expected to be completed by the end of 2008. The two expansions would bring Ningxia Huayuan's total capacity to 52,000 t/yr at five plants in Ningxia Province (China Magnesium Industry & Market Bulletin, 2007).

References Cited

China Direct, Inc., 2007, China Direct, Inc. to acquire two magnesium companies—New joint ventures to add 40,000 metric tons of annual production capacity: Boca Raton, FL, China Direct, Inc. press release, December 19. (Accessed January 3, 2008, at http://www.cdii.net/IR-pressrelease.html.)

China Direct, Inc., 2008, China Direct commences magnesium production at two new facilities adding 12,000 metric tons of annual capacity: Boca Raton, FL, China Direct, Inc. press release, January 23. (Accessed January 24, 2008, at http://www.cdii.net/IR-pressrelease.html.)

China Magnesium Industry & Market Bulletin, 2007, Ningxia Huayuan to expand its capacity in 2008: China Magnesium Industry & Market Bulletin, no. 21, November 30, p. 6.

China Magnesium Industry & Market Bulletin, 2008, Statistics and data: China Magnesium Industry & Market Bulletin, no. 30, February 1, p. 4-5.

Fertilizer Week, 2008, Six kilometre bypass put into operation: Fertilizer Week, v. 21, no. 37, January 4, p. 4.

McBeth, Karen, 2008, US Magnesium may add 18,000 mt to meet rising demand: Platts Metals Week, v. 79, no. 4, January 28, p. 1, 5-6.

McCoppin, Robert, 2008, Suburban company shutting doors, ending a way of life for hundreds: Chicago, IL, Daily Herald, January 10. (Accessed February 6, 2008, at http://www.dailyherald.com/story/?id=109732.)

Platts Metals Week, 2007, China to tax magnesium January 1: Platts Metals Week, v. 78, no. 53, December 31, p. 7-8.

United States Court of International Trade, 2008, Slip op. 08-1: United States Court of International Trade, January 8, (Accessed February 6, 2008, at http://www.cit.uscourts.gov/slip_op/Slip_op08/08-1.pdf.)

U.S. Department of Commerce, International Trade Administration, 2007, Notice of extension of time limit for preliminary results of antidumping duty administrative review—Magnesium metal from the Russian Federation: Federal Register, v. 72, no. 242, December 18, p. 71620-71621.

U.S. Department of Commerce, International Trade Administration, 2008, Pure magnesium from the People's Republic of China—Extension of time for the preliminary results of the antidumping duty administrative review: Federal Register, v. 73, no. 25, February 6, p. 6931-6932.

TABLE 1

U.S. IMPORTS FOR CONSUMPTION AND EXPORTS OF MAGNESIUM[1]

(Metric tons)

		2007				
	2006	January-September	October	November	December	January-December
Imports:						
Metal	31,900	18,400	2,850	2,800	3,090	27,200
Waste and scrap	17,200	15,000	2,390	2,120	1,690	21,200
Alloys (magnesium content)	25,200	16,600	1,890	1,840	1,690	22,000
Sheet, tubing, ribbons, wire, powder, and other (magnesium content)	927	909	204	145	247	1,510
Total	75,300	51,000	7,330	6,900	6,710	71,900
Exports:						
Metal	4,170	3,520	351	220	193	4,290
Waste and scrap	3,680	819	211	461	308	1,800
Alloys (gross weight)	2,290	5,220	673	878	807	7,570
Sheet, tubing, ribbons, wire, powder, and other (gross weight)	2,180	855	145	70	101	1,170
Total	12,300	10,400	1,380	1,630	1,410	14,800

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

Source: U.S. Census Bureau.