

Mineral Industry Surveys

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MAGNESIUM IN THE THIRD QUARTER 2001

Domestic production of primary magnesium in the third quarter of 2001 declined significantly from that in the second quarter, according to the U.S. Geological Survey. Producers' stocks and shipments in the second quarter also declined from those in the previous quarter.

Exports of magnesium through August 2001 were 15% lower than those in the same period of 2000. Magnesium

imports through August 2001 were 24% less than those in the corresponding period of 2000. Russia (48%) and Israel (17%) were the principal sources of imported metal. Canada (42%) and China (33%) were the principal sources of imported alloys.

Magnesium prices in the third quarter dropped slightly from those at the end of the second quarter. Prices are shown in the following table.

	Units	Beginning of quarter	End of quarter
Metals Week U.S. spot Western	Dollars per pound	\$1.22-\$1.29	\$1.21-\$1.28
Metals Week U.S. spot dealer import	do.	1.00-1.10	1.03-1.09
Metals Week European free market	Dollars per metric ton	1,700-1,900	1,700-1,900
Metal Bulletin free market	do.	1,750-1,850	1,700-1,800
Metal Bulletin China free market	do.	1,260-1,280	1,250-1,260

The International Trade Administration (ITA) finalized its antidumping and countervailing duties on magnesium from China, Israel, and Russia in September. For China, the antidumping duty for granular magnesium was set at 24.67% ad valorem for Minmetals Precious & Rare Metals Import and Export (China National Nonferrous Metals Industry Trading Group Corp.) and at 305.56% ad valorem as the China-wide rate (U.S. Department of Commerce, 2001d). Although China already has an antidumping duty established for pure magnesium of 108.26%, this duty did not cover granular magnesium. The original antidumping duty also covers magnesium alloy.

For Israel, the antidumping duty for pure magnesium was established at 28.14% ad valorem, and the countervailing duty was set at 16.52% (U.S. Department of Commerce, 2001a, c). For Russia, the antidumping duty was set at 0% ad valorem (U.S. Department of Commerce, 2001e).

In a vote by the commissioners, the International Trade Commission agreed with the ITA that imports of granular magnesium from China materially injured a U.S. industry, but

disagreed that imports from Israel injured a U.S. industry. The ITC found that imports of granular magnesium from Israel were negligible (defined as less than 3% of the total imported during a year). As a result, the ITC will direct the ITA to impose no duty on granular magnesium imported from Israel (U.S. International Trade Commission, November 2, 2001, Pure magnesium from China, but not Israel, injures U.S. industry, says ITC, accessed November 13, 2001, at URL <http://www.usitc.gov/er/nl2001/ER1102Y1.HTM>).

In addition, the ITA received requests to conduct administrative reviews of the antidumping duty on pure magnesium and the countervailing duties that were established for pure and alloy magnesium from Canada. Although the review has been done each year since the duties were instituted, these reviews will include Magnola Metallurgy Inc. for the first time (U.S. Department of Commerce, 2001b). For the antidumping duty, the period under review was August 1, 2000, to July 31, 2001, and the period for the countervailing duty reviews was calendar year 2000.

The ITA also finalized the countervailing duty for pure and

alloy magnesium from Canada for calendar year 1999. The duty was set at 1.21% ad valorem for Norsk Hydro Canada Inc. (U.S. Department of Commerce, 2001f).

On October 12, the Hydro Magnesium division of Norsk Hydro A/S announced that it would close its 42,000-metric-ton-per-year (t/yr) primary magnesium plant in Porsgrunn, Norway, by April 2002, citing competition from imports of low-cost magnesium from China into Europe. Hydro Magnesium planned to continue to operate its 44,000-t/yr primary magnesium plant in Becancour, Quebec, Canada, and increase capacity there to 48,000 t/yr by 2002 through debottlenecking. In addition, the company planned to continue to operate its existing casthouse in Norway, where ingot and scrap are remelted for magnesium alloy production. Hydro Magnesium also planned to begin operating its new 10,000-t/yr remelt facility in China by November 2001 (Hydro Magnesium, October 12, 2001, Hydro Magnesium announces restructuring of its metal production system, accessed October 12, 2001, via URL <http://www.magnesium.hydro.com>).

Hydro Magnesium also idled one of its four production lines at its magnesium recycling facility in Becancour in August. The closure reduces the capacity at the plant by 2,500 t/yr to 7,500 t/yr. This closure was attributed to a shortage of die-cast scrap and high inventory levels at the plant. The company has not made a decision on the length of time the line will be closed (Metal Bulletin, 2001a).

After determining that there was no economic viability in operating its plant as a scrap recycling plant, Pechiney announced that it would close its 17,000-t/yr Marignac, France, magnesium plant permanently. The plant had been closed since June while studies were done to see if the plant could operate economically (Platts Metals Week, 2001b). This plant was the only plant operating in the European Union (EU), and its closure, combined with the closure of Norsk Hydro's Norway plant, leaves Western Europe without any primary magnesium production capacity. In addition, the fate of the EU antidumping duty on magnesium from China is unknown. The duty was assessed to protect EU magnesium producers, but when Pechiney's plant closes, there will be no domestic industry to protect.

Investments from a private firm could enable the 17,000-t/yr Kalush magnesium plant in Ukraine to restart by 2002. The plant has been idle since 1998, and initially plans to begin production at a level of 10,000 t/yr using locally produced bischofite as a raw material. Output from the plant is expected to be marketed in Europe and the United States. The plant is owned 75% by a privately held Ukrainian company, Esko-Pivnich, and 25% by the State petrochemical company Oriana (Metal Bulletin, 2001c).

In Congo (Brazzaville), Magnesium Alloy Corp. (MagAlloy) entered into a financing agreement with Amphora Group Holding Luxembourg S.A, a European-based group, to develop the Kouilou Project. Under this agreement, MagAlloy will form two Luxembourg-based companies, Magnesium Alloy Holding and Mag-Energy Holding, to direct the development of the Kouilou Project and the associated energy requirements. By investing \$520 million and \$200 million, respectively, in these two joint-venture companies, Amphora will have a 75% interest in each. MagAlloy will hold a 25% interest in

Magnesium Alloy Holding and a 20% interest in Mag-Energy Holding; the remaining 5% interest will be held by third parties. This funding would help MagAlloy complete its proposed 60,000-t/yr magnesium plant by 2005 (Magnesium Alloy Corp., September 10, 2001, Magnesium Alloy Corporation enters into financing framework agreement, accessed September 24, 2001, at URL <http://www.magnesiumalloy.ca/press/010910.htm>).

After receiving an A\$100 million loan guarantee from the Federal Government, an A\$100 million commitment from the Queensland State government, and a commitment to purchase an additional A\$100 million in shares from its major shareholder Normandy Mining Ltd., Australian Magnesium Corp. Ltd. (AMC) filed a prospectus to raise A\$525 million to develop its proposed 60,000-t/yr magnesium plant in October. The offer was scheduled to close on November 16, and, if fully subscribed, would provide enough financing to complete the plant by 2004. An initial public offering by AMC in June for A\$625 million was unsuccessful. AMC then planned to issue a revised offering in September, but because of market conditions, the revised offering was canceled. After Normandy Mining offered to purchase the additional shares, AMC filed the prospectus in October (Australian Magnesium Corp. Ltd., October 15, 2001, Australian Magnesium public offer, accessed October 22, 2001, at URL http://www.austmg.com/documents/public_offer.pdf).

The Minister for Industry, Science, and Resources, Senator Minchin, announced that Mt. Grace Resources NL has been granted "Major Project Facilitation" status for its Batchelor magnesium project. The purpose of this is to achieve timely and efficient approvals for the proposed development. Through this process, the Department of Industry, Science and Resources will ensure that information on government approvals processes is provided promptly to Mt. Grace; all relevant government processes are coordinated so that, as far as possible, they occur simultaneously and without duplication; the government responds promptly to issues raised by the company; and assistance in identifying and accessing government support programs is provided. Mt. Grace plans to complete a 50,000-t/yr magnesium plant in Northern Territory by 2003 (Mt. Grace Resources, NL, September 26, 2001, Batchelor magnesium project granted major project facilitation status, accessed October 2, 2001, via URL <http://www.mtgrace.com/>).

Indcor Ltd. (formerly Crest Magnesium NL) announced that it was unable to secure an investment in its TasMag project and, as a result, the project has been put on hold. The company had planned to construct a 95,000 t/yr electrolytic magnesium plant in Tasmania, but cited low magnesium prices and plant closure announcements as reasons that it could not find investors (Indcor Ltd., September 24, 2001, TasMag project update and rights issue, accessed September 26, 2001 at URL <http://www.indcor.com.au/reports/TasMagRightsIssue24sep01.htm>).

Globex Mining Enterprises Inc. received a scoping study from Hatch Associates Inc. that indicated that construction of a mine and mill to process a magnesite-talc ore and a 90,000-t/yr magnesium plant would be economically feasible. The project scenario studied by Hatch consists of a mine-mill complex located near Timmins, Ontario, Canada, and a smelter complex

located west of Rouyn-Noranda, Quebec. The entire complex would require a capital expenditure of \$966 million, including a \$153 million contingency. The next step in the process would be a proposed prefeasibility study consisting of mine drilling and test work, metallurgical test work, preliminary engineering, environmental baseline data collection, environmental test work, market studies, and off-take agreement discussions. The projected cost of this study is \$9 million, and upon completion, would generate a bankable feasibility report. Subject to financing, the prefeasibility study was expected to take about 18 months (Globex Mining Enterprises Inc., September 25, 2001, Globex's magnesite project gets positive review in scoping study, accessed October 23, 2001, via URL <http://www.globexmining.com>).

Two magnesium recycling plants were set to begin production in October—one in the United States and one in the Czech Republic. Xstrata Magnesium Corp. began production at its Anderson, IL, facility on October 13. The firm planned to commission a second production line in December, and be producing at its full capacity of 25,000 t/yr in January 2002 (Platts Metals Week, 2001c). Magnesium Elektron also planned to begin production at its new plant in the Czech Republic in mid-October. Enough equipment is available at the plant to produce at a level of 7,000 t/yr by January 2002. Additional equipment was expected to be installed to increase capacity to 10,000 t/yr by mid-2002. Magnesium Elektron also operates a 10,000-t/yr magnesium recycling plant in the United Kingdom (Metal Bulletin, 2001b).

In China, three new magnesium alloy plants, with a total output capacity between 30,000 and 40,000 t/yr, were expected to be completed by the fourth quarter of 2001. All three plants are in the Shanxi Province—one each in Jincheng, Linyi, and Wuxiang. Production at these new plants was expected to be targeted to the export market (Platts Metals Week, 2001a).

Engineers at Ford Motor Co. are beginning to develop a front-end module for use in supporting some components in its

2006 model Ford Explorer. Magnesium would replace steel in this application, and although the design has not been completed, Ford estimates that the new component could weigh more than 4.5 kilograms (10 pounds). These new units could require about 7,500 t/yr of magnesium diecasting alloy (Wrigley, 2001).

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TABLE 1
U.S. IMPORTS FOR CONSUMPTION AND EXPORTS OF MAGNESIUM 1/

(Metric tons)

	2001					
	2000	January- May	June	July	August	January- August
Imports:						
Metal	22,900	8,370	547	2,170	1,410	12,500
Waste and scrap	9,890	4,630	856	573	840	6,890
Alloys (magnesium content)	56,300	16,200	2,280	2,480	3,590	24,500
Sheet, tubing, ribbons, wire, powder, other (magnesium content)	2,300	1,210	468	334	102	2,110
Total	91,400	30,400	4,150	5,550	5,940	46,000
Exports:						
Metal	7,300	2,880	330	328	222	3,760
Waste and scrap	6,400	2,830	513	251	680	4,270
Alloys (gross weight)	6,020	1,130	217	162	245	1,760
Sheet, tubing, ribbons, wire, powder, other (gross weight)	4,060	1,770	552	369	290	2,980
Total	23,800	8,610	1,610	1,110	1,440	12,800

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

Source: U.S. Census Bureau.