



U.S. Department of the Interior • Bureau of Mines

# MINERAL INDUSTRY SURVEYS

810 7th Street, NW

Washington, DC 20241

For information call:

Deborah A. Kramer, Commodity Specialist (202) 501-9394

Lillian M. Wood (data) (202) 501-9479

For MINES FaxBack call: (412) 892-4088

For MINES-DATA computer bulletin board call:

(202) 501-0373 (2400, N, 8, 1) for access

(202) 501-0406 for technical assistance

Magnesium, Quarterly  
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## MAGNESIUM IN THE SECOND QUARTER 1993

U.S. primary magnesium production in the second quarter of 1993 was 36,839 metric tons, slightly less than that in the previous quarter and 12% higher than that in the second quarter of 1992, according to the U.S. Bureau of Mines. Second quarter 1993 producer shipments of 31,096 tons were slightly lower than shipments in the first quarter, and inventories increased significantly to 17,533 tons.

U.S. magnesium imports through May 1993 were 470% higher than those in the corresponding period of 1992. This large growth in imports resulted mostly from an increase in primary magnesium imports. Russia and Ukraine have become the most significant import sources of primary magnesium constituting 67% and 12%, respectively, of the total. Exports of magnesium through May 1993 were 32% less than those through May 1992.

Quoted free market primary magnesium prices continued to decline during the second quarter. The Metals Week U.S. transaction price range dropped from \$1.42 to \$1.46 per pound at the beginning of the quarter to \$1.36 to \$1.46 by the end of the quarter. Beginning in July, Metals Week planned to begin publishing two primary magnesium prices – the U.S. spot Western price and the U.S. spot dealer import price. The spot Western price would only reflect North American producer-consumer transactions, while the spot dealer import would reflect the price of imported magnesium, delivered, duty paid. These two quotations would replace the U.S. transaction price, which is a weighted average of all transactions.

Metals Week's quoted European free market price range also declined steadily from \$1.09 to \$1.12 per pound at the beginning of the second quarter to \$1.03

to \$.107 at the end of the quarter. The Metal Bulletin free market price also followed the same trend. At the beginning of the quarter, the quoted price range was \$1.12 to \$1.15 per pound, but this decreased to \$1.03 to \$1.07 per pound by the end of the second quarter.

On August 16, the U.S.-Canada Binational Secretariat upheld findings by the Department of Commerce that Norsk Hydro Canada Inc. was dumping magnesium on the U.S. market. The panel, established by the U.S.-Canada Free Trade Agreement, also affirmed the countervailing duty determinations, except on two issues. The panel was unclear on why Commerce conducted a disproportionality analysis on an enterprise-by-enterprise basis rather than on an industry-by-industry basis. The panel also stated that Commerce's appropriate allocation period for grants to Norsk Hydro for pollution control equipment must be explained to be consistent with preceding binational panel cases. Commerce explanations of the two issues were due within 30 days of the findings.

Because it has been 1 year since the original antidumping and countervailing duty determinations for Canadian magnesium, interested parties have the opportunity to request an administrative review of the determinations. Requests must be received by Commerce by August 31. The review period for the antidumping duty is November 20, 1991, to July 31, 1993, and for the countervailing duties, the review period is from December 6, 1991, to December 31, 1992.

In Ukraine, the Government has introduced export duties on a variety of metals and raw materials. Included in these materials is magnesium, which has an export duty of 30% of the sales price, effective June 1, 1993.

Prepared by the Branch of Industrial Minerals and Branch of F



James Boyd  
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Previously, the country had no export duty on magnesium. In May, Alusuisse-Lonza Trading Group reportedly signed an agreement with Kemo Komplex in Ukraine to market its Kalusch 99.9% magnesium in most areas of the world. Kemo Komplex was expected to continue to market magnesium in Europe, and its agreement with Alusuisse-Lonza would improve its marketing transportation, and storage arrangements.

At the end of June, Israel's Dead Sea Works (DSW) announced that it had signed a \$9 million contract with a consortium of companies and research institutes in the Commonwealth of Independent States to purchase electrolytic cell technology. By mid-July two Israeli engineering firms had begun work on the engineering, construction, procurement, and management for the planned 25,000-ton-per-year magnesium plant, scheduled to be completed in 1995.

Japanese magnesium producer, Ube Industries Ltd., reportedly signed a formal agreement with an unidentified partner in China to take dolomite feedstock under a long-term agreement. Previously, Ube Industries had long-term agreements with suppliers in the Republic of Korea and Taiwan, and made spot purchases from China. Ube Industries was estimated to require between 80,000 and 100,000 tons of dolomite per year.

Kawasaki Steel Corp. in Japan announced that it is

testing a desulfurization process using magnesium; this company would be the first Japanese steel producer to use magnesium. This could increase the world magnesium desulfurization market significantly. U.S.-based Rossborough Manufacturing was finalizing a joint venture with the East Slovak Steel Co. to construct a blending plant to produce magnesium-based desulfurization powders in Slovakia. Rossborough planned to expand the plant as demand for desulfurization increases in eastern Europe.

Dynacast Inc. reportedly acquired the assets of Lone Star Die Casting Corp., New Braunfels, TX, a major supplier of aluminum and magnesium diecastings for garden tools.

Chrysler Corp. announced that it would incorporate magnesium steering wheel armatures on its new economy car models, the Plymouth Neon and the comparable Dodge model, which are scheduled to be introduced early in 1994. It is estimated that this application will consume about 200 to 250 tons of magnesium annually. Chrysler's components will be manufactured by Gibbs Die Casting Corp., Henderson, KY. Ford Motor Co. also is investigating the potential for magnesium steering wheels for the 1996 models of its Lincoln Mark VIII. Ford currently uses magnesium steering wheels on its Taurus/Sable and Thunderbird/Cougar platforms.

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

	(Metric tons)					
	1992	1993				
		Jan.-Feb.	Mar.	Apr.	May	Jan.-May <sup>1</sup>
<b>Imports:</b>						
Metal . . . . .	4,243	1,509	2,140	1,704	994	6,347
Waste and scrap . . . . .	2,425	573	386	212	260	1,431
Alloys (magnesium content) . . . . .	3,837	1,624	857	437	584	3,502
Sheet, tubing, ribbons, wire, powder, and other (magnesium content) . . . . .	1,336	381	150	243	96	870
<b>Total<sup>1</sup></b> . . . . .	<b>11,841</b>	<b>4,086</b>	<b>3,533</b>	<b>2,596</b>	<b>1,934</b>	<b>12,149</b>
<b>Exports:</b>						
Metal . . . . .	35,824	5,376	1,771	2,224	2,084	11,455
Waste and scrap . . . . .	2,496	319	169	57	229	774
Alloys (gross weight) . . . . .	1,473	119	50	222	308	700
Sheet, tubing, ribbons, wire, powder, and other (gross weight) . . . . .	12,158	2,539	662	990	501	4,691
<b>Total<sup>1</sup></b> . . . . .	<b>51,951</b>	<b>8,353</b>	<b>2,652</b>	<b>3,493</b>	<b>3,122</b>	<b>17,621</b>

<sup>1</sup>Data may not add to totals shown because of independent rounding.

Source: Bureau of the Census.

Figure 1.—U.S. primary magnesium production, shipments, and inventories

