

Mineral Industry Surveys

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MOLYBDENUM IN JULY 2003

Domestic production of molybdenum in concentrate in July 2003 was about 18% less than that of the previous month and was about 33% less than that of July 2002, according to the U.S. Geological Survey. Year-to-date production of molybdenum in concentrate from January through July was about 1% more than during the same period in 2002. Producer stocks of molybdenum in concentrate, oxide, and other product forms were about 8,250 metric tons (t) at the beginning of 2003 and 4,381 t at the end of July.

According to Ryan's Notes (2003b), the July monthly averages for U.S. ferromolybdenum (FeMo) prices ranged from \$5.731 to \$5.925 per pound of molybdenum content, as compared with \$5.919 to \$6.119 in June. European FeMo monthly averages ranged from \$12.563 to \$13.000 per kilogram of molybdenum content in July as compared with \$13.281 to \$13.650 in June. In July, worldwide molybdenum oxide prices ranged from \$5.138 to \$5.369 per pound versus \$5.500 to \$5.763 in June.

Molybdenum oxide prices were steady by the end of July after trending lower in the first week of the month. U.S. Dealer Oxide prices ranged from \$5.00 to \$5.20 per pound in the last week of July. European FeMo prices were booked at \$12.50 to \$12.80 per kilogram and Chinese material was offered at just over \$11.80 per kilogram. Traders expect molybdenum oxide prices to hold and that FeMo prices will rise to move the spread

back to the customary 50-70 cents per pound FeMo premium (Platts Metals Week, 2003b).

Molybdenum supply in the first half of 2003 continued at about the same level as 2002 and supply and demand seem to be balanced. Although there seemed to be a large supply of molybdenum oxide available, it was lower grade Chinese material that must be blended with higher grade Western material to make standard FeMo. The shortage of high-quality Western molybdenum oxide is keeping the market tight (Ryan's Notes, 2003a).

China's Jinduicheng Molybdenum Mining Corp. plans to reduce its mining output in September owing to a 40-day maintenance shutdown of ore dressing plants. Output in September should be about 400 t, about one-half of normal production. Mine production in Luanchuan County, China, was reduced in July by heavy rainfall (Platts Metals Week, 2003a).

References Cited

- Platts Metals Week, 2003a, JDC to cut moly output: Platts Metals Week, v. 74, no. 29, July 21, p. 12.
Platts Metals Week, 2003b, Moly oxide prices steady in quiet trade: Platts Metals Week, v. 74, no. 30, July 28, p. 4.
Ryan's Notes, 2003a, Moly supply in the first half: Ryan's Notes, v. 9, no. 28, July 14, p. 3.
Ryan's Notes, 2003b, [untitled]: Ryan's Notes, v. 9, no. 31, August 4, p. 4.

TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS¹

(Metric tons, contained molybdenum)

	2002	2003		Year to date
	January-December	June	July	
Production	32,400	2,340 ^r	1,920	18,200
Shipments: ²				
Domestic	21,200	1,100	989	10,800
Export	11,100	1,160 ^r	1,170	7,370

^rRevised.

¹Data are rounded to no more than three significant digits.

²As reported by producers.

TABLE 2
U.S. REPORTED PRODUCTION AND SHIPMENTS OF MOLYBDENUM PRODUCTS¹

(Metric tons, contained molybdenum)

	2002	2003		Year to date
	January-December	June	July	
Gross production	31,300	3,440	4,240	23,100
Internal consumption ²	20,700	2,380 ^r	2,740	16,800
Gross shipments	27,500	2,150 ^r	2,860	16,800

^rRevised.

¹Data are rounded to no more than three significant digits.

²Includes molybdic oxides, metal powder, ammonium molybdate, sodium molybdate, and other.

TABLE 3
U.S. REPORTED CONSUMPTION, BY END USES, AND CONSUMER STOCKS OF MOLYBDENUM MATERIALS¹

(Kilograms, contained molybdenum)

End use	Molybdc oxides	Ferro molyb- denum ²	Ammonium and sodium molybdate	Molyb- denum scrap	Other	Total
2003, June:						
Steel:						
Carbon	11,100	W	--	--	W	11,100
High-strength low-alloy	32,800	8,990	--	--	--	41,800
Stainless and heat-resisting	144,000	73,300	--	--	7,180	224,000
Full alloy	118,000	161,000	--	--	1,910	282,000
Tool	69,300	W	--	--	W	69,300
Total	375,000	244,000	--	--	9,090	628,000
Cast irons (gray, malleable, and ductile iron)	W	17,500	--	--	763	18,200
Superalloys	61,900	W	--	(3)	117,000	179,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	313	3,420	--	--	2,970	6,700
Mill products made from metal powder ⁴	--	--	--	--	86,300	86,300
Cemented carbides and related products ⁵	--	--	--	--	8	8
Chemical and ceramic uses:						
Pigments	--	--	W	--	W	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	--	--
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	13,700	13,700
Other	1,090	40,000	76,600	--	18,100	136,000
Grand total	516,000	304,000	76,600	--	248,000	1,140,000
Stocks, June 30, 2003	327,000	210,000	4,220	42,500	865,000	1,450,000
2003, July:						
Steel:						
Carbon	12,700	W	--	--	W	12,700
High-strength low-alloy	28,800	15,000	--	--	--	43,800
Stainless and heat-resisting	163,000	63,400	--	--	7,180	234,000
Full alloy	101,000	162,000	--	--	1,890	265,000
Tool	61,300	W	--	--	W	61,300
Total	367,000	240,000	--	--	9,070	617,000
Cast irons (gray, malleable, and ductile iron)	W	15,200	--	--	763	15,900
Superalloys	59,200	W	--	(3)	134,000	193,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	112	2,560	--	--	2,610	5,280
Mill products made from metal powder ⁴	--	--	--	--	122,000	122,000
Cemented carbides and related products ⁵	--	--	--	--	--	--
Chemical and ceramic uses:						
Pigments	--	--	W	--	W	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	--	--
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	16,200	16,200
Other	1,330	35,300	76,800	--	18,300	132,000
Grand total	505,000	293,000	76,800	--	303,000	1,180,000
Stocks, July 31, 2003	364,000	170,000	4,040	24,800	857,000	1,420,000

W Withheld to avoid disclosing company proprietary data; included in "Other" of the "Miscellaneous and unspecified uses" category. -- Zero.

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

²Includes calcium molybdate.

³Included in "Other" of the "Superalloys" category.

⁴Includes ingot, wire, rod, and sheet.

⁵Includes construction, mining, oil and gas, metal working machinery.

TABLE 4
U.S. EXPORTS OF MOLYBDENUM ORES AND CONCENTRATES
(including roasted concentrate), BY COUNTRY¹

(Kilograms, contained molybdenum)

Country	2002	2003		Year to date
	January-December	May	June	
Australia	46,900	6,000	--	24,000
Belgium	4,380,000	257,000	275,000	1,520,000
Brazil	32,600	8,200	708	24,800
Canada	1,080,000	38,800	132,000	619,000
Chile	16,200	--	--	14,200
China	56,700	--	2,360	2,360
Germany	64,400	--	--	1,440
India	141,000	--	--	11,300
Italy	47,900	--	--	15,200
Japan	1,130,000	146,000	68,100	954,000
Korea, Republic of	70,600	9,420	6,290	37,400
Mexico	484,000	459,000	232,000	1,960,000
Netherlands	7,330,000	854,000	856,000	4,340,000
Spain	41,200	--	--	--
Sweden	35,000	--	5,150	25,700
Taiwan	12,600	--	--	9,590
United Kingdom	4,330,000	443,000	455,000	2,670,000
Other	153,000	41,200	13,300	86,700
Total	19,500,000	2,260,000	2,050,000	12,300,000

-- Zero.

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

Source: U.S. Census Bureau.

TABLE 5
U.S. EXPORTS OF FERROMOLYBDENUM, BY COUNTRY¹

(Kilograms, contained molybdenum)

Country	2002	2003		Year to date
	January-December	May	June	
Australia	--	273	--	546
Canada	597,000	16,000	44,700	206,000
Chile	240	--	--	--
Denmark	5,110	--	--	--
Japan	--	--	--	61
Mexico	51,400	--	--	7,590
Netherlands	--	--	--	25,500
Switzerland	21,800	--	--	--
Taiwan	274	--	--	--
Total	676,000	16,300	44,700	239,000

-- Zero.

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

Source: U.S. Census Bureau.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF MOLYBDENUM PRODUCTS¹

(Kilograms, unless otherwise specified)

Material	January-December 2002			June 2003		
	Gross weight	Contained molybdenum	Value (c.i.f.) (thousands)	Gross weight	Contained molybdenum	Value (c.i.f.) (thousands)
Ore and concentrates roasted	7,030,000	4,370,000	\$33,500	334,000	207,000	\$1,900
Ore and concentrates other	664,000	340,000	3,450	402,000	188,000	2,080
Molybdenum chemicals:						
Oxides and hydroxides	1,200,000	NA	7,660	99,000	NA	1,040
Molydates of ammonium	1,740,000	1,010,000	11,200	30,000	16,900	228
Molydates (all others)	435,000	88,600	1,630	64,000	26,200	247
Molybdenum orange	1,300,000	NA	5,490	37,800	NA	169
Ferromolybdenum	5,570,000	3,590,000	31,400	400,000	253,000	2,620
Molybdenum powders	39,500	31,700	1,110	6,970	4,560	234
Molybdenum unwrought	43,500	43,200	542	23,700	23,600	238
Molybdenum waste and scrap	697,000	617,000	6,910	76,200	75,100	693
Molybdenum wire	14,600	NA	697	1,000	NA	87
Molybdenum other	84,800	NA	7,240	3,840	NA	306
Total	18,800,000	10,100,000	111,000	1,480,000	795,000	9,840

NA Not available. -- Zero.

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

Source: U.S. Census Bureau.