

Mineral Industry Surveys

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MOLYBDENUM IN JANUARY 2004

Domestic production of molybdenum in concentrate in January 2004 was about 5% more than that of the previous month and was about 11% more than that of January 2003, according to the U.S. Geological Survey. Producer stocks of molybdenum in concentrate, oxide, and other product forms were about 4,730 metric tons (t) at the beginning of 2004, and 5,620 t at the end of January.

According to Ryan's Notes (2004), the January monthly averages for U.S. ferromolybdenum prices ranged from \$8.825 to \$9.050 per pound of molybdenum content, compared with \$7.663 to \$7.925 in December. European ferromolybdenum monthly averages ranged from \$19.563 to \$20.075 per kilogram of molybdenum content in January as compared to \$17.625 to \$17.998 in December. In January, worldwide molybdenum oxide prices ranged from \$7.894 to \$8.175 per pound versus \$6.888 to \$7.306 in December.

China's Jinduicheng Molybdenum Mining Corp. (JDC) recently acquired a 65% stake in a large molybdenum mine in Henan Province, Ruyang County. The new mine has a molybdenum concentrate capacity of 600-800 metric tons per year (t/yr), but should be expanded to 2,500 to 3,000 t/yr by the end of 2004. Ruyang's molybdenum reserves are estimated at 400,000 t (Platts Metals Week, 2004).

Several Chinese molybdenum companies said they would target China's domestic market in 2004 in response to the government's decision to cut the export tax rebate from 14% to 8%, effective January 1 (Platts Metals Week, 2004). This decision, combined with supply disruptions in China and Russia as reported in Molybdenum in December 2003, likely caused molybdenum oxide quotes to rise to \$8.30 to \$8.70 per pound cif Japan. Growing demand from China's stainless steel mills curbed Chinese ferromolybdenum exports to the Asian market, contributing to ferromolybdenum's price rising to \$18.50 per pound cif Japan (Metal Bulletin Research, 2004).

Included in this Mineral Industry Surveys are U.S. production and shipments of molybdenum concentrates and materials, plus U.S. consumption, by end use, and stocks of molybdenum material in December 2003 and January 2004; also included are trade data for November and December 2003.

References Cited

- Metal Bulletin Research, 2004, Molybdenum highlights, European suppliers enjoy strong start to 2004: Metal Bulletin Research, Ferro-alloys Monthly, no. 137, January 30, p. 14.
Platts Metals Week, 2004, China's JDC buys big moly mine, more domestic sales seen: Platts Metals Week, v. 75, no. 4, January 26, p. 11.
Ryan's Notes, 2004, [untitled]: Ryan's Notes, v. 10, no. 5, February 2, p. 4.

TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS¹

(Metric tons, contained molybdenum)

	2003		2004	
	January- December ^{r, p}	December ^r	January	Year to date
Production	34,000	3,050	3,200	3,200
Shipments: ²				
Domestic	20,200	1,720	2,060	2,060
Export	13,700	1,470	1,210	1,210

^pPreliminary. ^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)

	2003		2004	
	January- December ^p	December	January	Year to date
Gross production	41,400	4,480	5,950	5,950
Internal consumption ²	29,600	2,900	3,790	3,790
Gross shipments	31,100 ^r	2,930 ^r	2,510	2,510

^pPreliminary. ^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, December:						
Steel:						
Carbon	10,300	W	--	--	W	10,300
High-strength low-alloy	33,700	8,230	--	--	--	41,900
Stainless and heat-resisting	192,000	27,900	--	--	7,180	227,000
Full alloy	107,000	165,000	--	--	1,860	274,000
Tool	55,800	W	--	--	W	55,800
Total	399,000	201,000	--	--	9,040	609,000
Cast irons (gray, malleable, and ductile iron)	W	14,200	--	--	763	15,000
Superalloys	68,700	W	--	(3)	96,100	165,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	177	3,560	--	--	2,610	6,350
Mill products made from metal powder ⁴	--	--	--	--	79,100	79,100
Cemented carbides and related products ⁵	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	936	936
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	18,800	18,800
Other	1,090	36,700	74,900	--	17,400	130,000
Grand total	546,000	255,000	74,900	--	225,000	1,100,000
Stocks, December 31, 2003	403,000	189,000	4,870	45,800	850,000	1,490,000
2004, January:						
Steel:						
Carbon	12,300	W	--	--	W	12,300
High-strength low-alloy	31,000	9,620	--	--	--	40,600
Stainless and heat-resisting	210,000	36,800	--	--	7,180	254,000
Full alloy	99,600	171,000	--	--	1,860	273,000
Tool	61,000	W	--	--	W	61,000
Total	414,000	218,000	--	--	9,040	641,000
Cast irons (gray, malleable, and ductile iron)	W	9,560	--	--	763	10,300
Superalloys	72,700	W	--	(3)	95,300	168,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	84	1,490	--	--	2,610	4,190
Mill products made from metal powder ⁴	--	--	--	--	62,000	62,000
Cemented carbides and related products ⁵	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	1,340	1,340
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	17,000	17,000
Other	1,090	45,600	75,000	--	17,400	139,000
Grand total	565,000	274,000	75,000	--	205,000	1,120,000
Stocks, January 31, 2004	385,000	190,000	5,730	41,600	852,000	1,470,000

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	November	December	
Australia	46,900	3,540	2,360	102,000
Belgium	4,380,000	222,000	238,000	3,190,000
Brazil	32,600	5,190	280	42,600
Canada	1,080,000	32,600	29,900	910,000
Chile	16,200	1,210	352,000	368,000
China	56,700	--	19,500	82,600
Germany	64,400	--	--	1,440
India	141,000	376	32,400	44,300
Italy	47,900	--	5,070	20,300
Japan	1,130,000	144,000	136,000	2,000,000
Korea, Republic of	70,600	856	1,880	61,400
Mexico	484,000	168,000	41,100	3,730,000
Netherlands	7,330,000	840,000	366,000	10,900,000
Spain	41,200	--	--	4,130
Sweden	35,000	--	--	25,700
Taiwan	12,600	--	--	9,590
United Kingdom	4,330,000	880,000	558,000	7,880,000
Other	153,000	26,800	14,400	154,000
Total	19,500,000	2,330,000	1,800,000	29,500,000

-- 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	November	December	
Australia	--	327	--	873
Canada	597,000	65,400	63,800	547,000
Chile	240	--	--	--
Denmark	5,110	--	--	241
Japan	--	--	--	61
Mexico	51,400	10,900	--	43,100
Netherlands	--	--	--	25,500
Switzerland	21,800	--	--	--
Taiwan	274	--	--	--
Total	676,000	76,600	63,800	617,000

-- 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			December 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	769,000	491,000	\$6,540
Ore and concentrates other	664,000	340,000	3,450	458	247	5
Molybdenum chemicals:						
Oxides and hydroxides	1,200,000	NA	7,660	18,000	NA	135
Molydates of ammonium	1,740,000	1,010,000	11,200	170,000	101,000	1,420
Molydates (all others)	435,000	88,600	1,630	45,500	36,100	186
Molybdenum orange	1,300,000	NA	5,490	54,400	NA	241
Ferromolybdenum	5,570,000	3,590,000	31,400	378,000	237,000	3,410
Molybdenum powders	39,500	31,700	1,110	4,670	4,470	220
Molybdenum unwrought	43,500	43,200	542	255	245	45
Molybdenum waste and scrap	697,000	617,000	6,910	31,400	21,200	407
Molybdenum wire	14,600	NA	697	862	NA	61
Molybdenum other	84,800	NA	7,240	6,480	NA	590
Total	18,800,000	10,100,000	111,000	1,480,000	892,000	13,300

NA Not available.

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

Source: U.S. Census Bureau.