

Mineral Industry Surveys

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MOLYBDENUM IN FEBRUARY 2007

Domestic production of molybdenum in concentrate in February 2007 was about 18% less than the output of the previous month and about 2% less than that of February 2006, according to the U.S. Geological Survey. Producer stocks of molybdenum in concentrate, oxide, and other product forms were about 5,330 metric tons (t) at the beginning of 2007 and about 4,700 t at the end of February.

According to Ryan's Notes (2007b), the February monthly average price range for U.S. ferromolybdenum (FeMo) was from \$28.313 to \$28.781 per pound of molybdenum content, compared with \$26.889 to \$27.444 in January. European FeMo monthly averages ranged from \$62.463 to \$63.775 per kilogram (kg) of molybdenum content in February compared with \$58.667 to \$60.222 per kg in January. In February, worldwide molybdenum oxide (MoO₃) prices ranged from \$25.400 to \$25.875 per pound versus \$24.861 to \$25.383 per pound in January.

Phelps Dodge Corp. boosted molybdenum production in 2006 to about 30,800 t (68 million pounds) from about 28,100 t (62

million pounds) in 2005. Most of the increased production, about 2,200 t (4.9 million pounds), occurred at the Henderson Mine, while the byproduct operations increased production slightly by high grading. Phelps Dodge predicted a 2% decrease in molybdenum production for 2006, as the company expected continued high grading of molybdenum ore to be unsustainable (Ryan's Notes, 2007a).

Included in this Mineral Industry Surveys are U.S. production and shipments of molybdenum concentrates and materials, U.S. consumption by end use, and stocks of molybdenum material in January and February 2007. Export data for December 2006 and January 2007 and import data for January 2007 are also included.

References Cited

- Ryan's Notes, 2007a, PD's moly production rises 9%: Ryan's Notes, v. 13, no. 6, February 5, p. 2.
Ryan's Notes, 2007b, [untitled]: Ryan's Notes, v. 13, no. 10, March 5, p. 10.

TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS¹

(Metric tons, contained molybdenum)

	2006 ^p		2007		
	January- December	January- February ^r	January	February	January- February
Production	60,600	9,730	5,530	4,530	10,100
Shipments: ²					
Domestic	39,700 ^r	6,410	3,610 ^r	3,220	6,830
Export	21,000	3,330	2,110 ^r	1,290	3,400

^pPreliminary. ^rRevised.

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

²As reported by producers.

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

(Metric tons, contained molybdenum)

	2006 ^p		2007		
	January- December	January- February ^r	January	February	January- February
Gross production	78,000	13,900	6,240	6,640	12,900
Internal consumption ²	47,400	8,320	3,980	3,970	7,950
Gross shipments	51,000	9,030	4,790	4,290	9,080

^pPreliminary. ^rRevised.

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

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	Molybdic oxides	Ferro molybdenum ²	Ammonium and sodium molybdate	Molybdenum scrap	Other	Total
2007, January:						
Steel:						
Carbon	11,900	W	--	--	W	11,900
High-strength low-alloy	41,200	8,060	--	--	11,300	60,600
Stainless and heat-resisting	186,000	64,900	--	W	6,510	257,000
Full alloy	161,000	140,000	--	--	1,510	302,000
Tool	71,700	W	--	--	--	71,700
Total	471,000	213,000	--	W	19,400	703,000
Cast irons (gray, malleable, and ductile iron)	W	7,530	--	--	763	8,300
Superalloys	68,600	W	--	W	78,000	147,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	103	3,750	--	--	--	3,850
Mill products made from metal powder ³	--	--	--	--	203,000	203,000
Cemented carbides and related products ⁴	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	1,180	1,180
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	10,700	10,700
Other	1,090	30,200	73,000	68,300	16,800	189,000
Grand total	618,000	254,000	73,000	68,300	330,000	1,340,000
Stocks, January 31, 2007	526,000	339,000	2,760	25,700	855,000	1,750,000
2007, February:						
Steel:						
Carbon	14,000	W	--	--	W	14,000
High-strength low-alloy	33,400	7,520	--	--	11,300	52,300
Stainless and heat-resisting	162,000	63,100	--	W	6,510	232,000
Full alloy	156,000	270,000	--	--	1,510	427,000
Tool	62,200	W	--	--	--	62,200
Total	428,000	340,000	--	W	19,400	787,000
Cast irons (gray, malleable, and ductile iron)	W	7,770	--	--	763	8,530
Superalloys	83,200	W	--	W	90,400	174,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	235	4,710	--	--	--	4,950
Mill products made from metal powder ³	--	--	--	--	199,000	199,000
Cemented carbides and related products ⁴	--	--	--	--	6	6
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	613	613
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	10,600	10,600
Other	1,090	34,200	72,700	58,600	16,800	183,000
Grand total	589,000	387,000	72,700	58,600	338,000	1,450,000
Stocks, February 28, 2007	553,000	315,000	2,720	22,000	848,000	1,740,000

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.

³Includes ingot, wire, rod, and sheet.

⁴Includes construction, mining, oil and gas, metalworking machinery.

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

(Kilograms, contained molybdenum)

Country	2006		2007 January	
	January- December	January		December
Australia	88,800	--	--	--
Belgium	7,490,000	521,000	90,400	380,000
Brazil	113,000	--	--	599
Canada	2,680,000	201,000	198,000	278,000
Chile	259,000	--	80,700	--
China	405,000	43,100	--	36,000
India	82,800	1,440	24,000	--
Japan	2,260,000	108,000	162,000	85,700
Korea, Republic of	45,000	--	--	1,090
Mexico	6,070,000	377,000	297,000	642,000
Netherlands	10,300,000	1,240,000	1,120,000	1,890,000
Taiwan	53,400	--	23,800	--
United Kingdom	7,280,000	578,000	678,000	439,000
Other	78,500	--	22,200	13,200
Total	37,200,000	3,070,000	2,700,000	3,770,000

-- 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	2006		2007 January	
	January- December	January		December
Argentina	14,500	--	--	--
Australia	24,500	--	349	--
Brazil	37,700	--	--	--
Canada	1,760,000	18,900	21,000	49,900
Denmark	57	--	--	--
India	667	--	300	--
Japan	60	--	--	--
Mexico	143,000	9,240	603	762
Netherlands	14,000	--	--	--
Singapore	1,630	--	--	--
Switzerland	12,000	--	--	--
Total	2,010,000	28,100	22,200	50,600

-- 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 2006			January 2007		
	Gross weight	Contained molybdenum	Value ² (thousands)	Gross weight	Contained molybdenum	Value ² (thousands)
Ore and concentrates roasted	9,570,000	5,900,000	\$167,000	594,000	376,000	\$13,900
Ore and concentrates other	10,900,000	5,000,000	227,000	1,980,000	989,000	46,900
Molybdenum chemicals:						
Oxides and hydroxides	629,000	NA	24,300	18,900	NA	756
Molybdates of ammonium	1,430,000	844,000	34,100	60,800	34,300	2,090
Molybdates (all others)	241,000	72,700	2,810	13,400	838	273
Molybdenum orange	822,000	NA	5,110	45,100	NA	241
Ferromolybdenum	4,810,000	3,060,000	165,000	563,000	344,000	20,400
Molybdenum powders	367,000	270,000	17,600	16,400	16,300	1,270
Molybdenum unwrought	191,000	191,000	10,800	16,600	16,500	1,020
Molybdenum waste and scrap	452,000	445,000	27,800	57,400	55,500	3,200
Molybdenum wire	18,600	NA	2,550	1,440	NA	218
Molybdenum other	130,000	NA	17,000	18,900	NA	1,720
Total	29,600,000	15,800,000	701,000	3,390,000	1,830,000	92,000

NA Not available.

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

²Customs value.

Source: U.S. Census Bureau.