

Mineral Industry Surveys

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MOLYBDENUM IN FEBRUARY 2008

Domestic production of molybdenum (Mo) in concentrate in February 2008 was about 7% more than the output of the previous month and about 10% more than that of February 2007, according to the U.S. Geological Survey. Producer stocks of molybdenum in concentrate, oxide, and other product forms were about 5,770 metric tons (t) at the beginning of 2008 and about 5,140 t at the end of February.

According to Ryan's Notes (2008), the February 2008 monthly average price range for U.S. ferromolybdenum (FeMo) was \$36.250 to \$36.667 per pound (lb) of molybdenum content, compared with \$35.188 to \$35.531 per lb in January 2008. European FeMo monthly averages ranged from \$78.389 to \$79.361 per kilogram (kg) of molybdenum content in February compared with \$77.750 to \$78.875 per kg in January. In February, worldwide molybdenum oxide (MoO₃) prices ranged from \$33.239 to \$33.694 per lb versus \$32.938 to \$33.338 per lb in January.

Thompson Creek Metals Co. announced plans to produce approximately 24 million pounds (Mlb) (10,900 t) of contained

molybdenum in 2008 and around 34 Mlb in 2009 as the result of efficiency improvements, expansion of mill facilities, and new mining operations. The company's 2007 output was 16 Mlb (7,300 t), significantly lower than originally anticipated. The company attributes the lower output to production difficulties that included a pit wall failure at the Endako Mine in British Columbia, Canada, in November 2007 (Metal Pages, 2008).

Included in this Mineral Industry Surveys are U.S. production and shipments of molybdenum concentrates and materials, U.S. consumption by end use, and consumer stocks of molybdenum material in January and February 2008. Export data for December 2007 and January 2008 and import data for January 2008 are also included.

References Cited

- Metal Pages, 2008, Thompson Creek plans major Moly expansion: Metal Pages, February 27. (Accessed April 20, 2009, via <http://www.metal-pages.com/news>.)
Ryan's Notes, 2008, [untitled]: Ryan's Notes, v. 14, no. 9, March 3, p. 13.

TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS¹

(Metric tons, contained molybdenum)

	2007 ^p		2008		
	January- December	January- February	January	February	January- February
Production	57,000	10,100	4,660	4,990	9,650
Shipments: ²					
Domestic	40,600	6,880 ^r	3,410	3,650	7,060
Export	16,400	3,400	1,300	1,490	2,790

^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)

	2007 ^p		2008		
	January- December	January- February	January	February	January- February
Gross production	72,800	12,900	6,390	6,030	12,400
Internal consumption ²	41,700	7,950	3,150	3,670	6,820
Gross shipments	48,700	8,510 ^r	4,700	4,300	9,000

^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 molyb- denum ²	Ammonium and sodium molybdate	Molyb- denum scrap	Other	Total
2008, January:						
Steel:						
Carbon	31,000	W	--	--	W	31,000
High-strength low-alloy	65,400	7,720	--	--	11,300	84,500
Stainless and heat-resisting	171,000	64,400	--	W	6,510	242,000
Full alloy	244,000	323,000	--	--	1,510	568,000
Tool	15,300	W	--	--	--	15,300
Total	527,000	395,000	--	W	19,400	941,000
Cast irons (gray, malleable, and ductile iron)	W	20,700	--	--	763	21,500
Superalloys	75,500	W	--	W	78,800	154,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	127	6,510	--	--	--	6,640
Mill products made from metal powder ³	--	--	--	--	209,000	209,000
Cemented carbides and related products ⁴	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	646	646
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	11,400	11,400
Other	1,090	27,900	72,900	74,400	16,800	193,000
Grand total	681,000	450,000	72,900	74,400	337,000	1,610,000
Stocks, January 31, 2008	310,000	321,000	4,060	6,280	852,000	1,490,000
2008, February:						
Steel:						
Carbon	30,600	W	--	--	W	30,600
High-strength low-alloy	53,600	10,700	--	--	11,300	75,600
Stainless and heat-resisting	170,000	64,200	--	W	6,510	241,000
Full alloy	247,000	277,000	--	--	1,510	526,000
Tool	15,200	W	--	--	--	15,200
Total	517,000	352,000	--	W	19,400	888,000
Cast irons (gray, malleable, and ductile iron)	W	20,700	--	--	763	21,500
Superalloys	60,400	W	--	W	78,800	139,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	281	7,390	--	--	--	7,670
Mill products made from metal powder ³	--	--	--	--	180,000	180,000
Cemented carbides and related products ⁴	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	1,040	1,040
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	11,100	11,100
Other	1,090	35,700	72,800	72,500	16,800	199,000
Grand total	656,000	416,000	72,800	72,500	308,000	1,530,000
Stocks, February 29, 2008	362,000	302,000	4,110	20,400	851,000	1,540,000

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	2007			2008 January
	January- December	January	December	
Australia	800	--	--	--
Belgium	6,730,000	380,000	958,000	911,000
Brazil	119,000	599	8,760	--
Canada	2,580,000	278,000	148,000	384,000
Chile	1,270,000	--	--	--
China	71,500	36,000	16	--
Finland	38,000	--	--	--
India	119,000	--	--	--
Italy	19,000	--	--	12,000
Japan	2,230,000	85,700	144,000	273,000
Korea, Republic of	232,000	1,090	51,900	21,600
Mexico	4,760,000	642,000	336,000	424,000
Netherlands	9,660,000	1,890,000	818,000	860,000
Pakistan	75,600	--	--	--
Switzerland	1,630	--	--	--
Taiwan	17,900	--	--	--
Thailand	9,620	9,620	--	--
United Kingdom	5,800,000	439,000	346,000	283,000
Vietnam	4,990	2,140	857	--
Other	80,000	1,450	29,800	28,500
Total	33,800,000	3,770,000	2,840,000	3,200,000

-- 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	2007			2008 January
	January- December	January	December	
Australia	25,000	--	--	--
Canada	838,000	49,900	128,000	87,900
Denmark	394	--	--	--
India	1,090	--	--	140
Mexico	23,700	762	--	12,600
Netherlands	145,000	--	--	--
Philippines	735	--	--	--
Saudi Arabia	149,000	--	--	--
South Africa	13,500	--	--	--
United Kingdom	24,900	--	--	--
Total	1,220,000	50,600	128,000	101,000

-- 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 2007			January 2008		
	Gross weight	Contained molybdenum	Value ² (thousands)	Gross weight	Contained molybdenum	Value ² (thousands)
Ore and concentrates roasted	8,680,000	5,430,000	\$181,000	886,000	553,000	\$19,200
Ore and concentrates other	15,000,000	6,960,000	372,000	1,570,000	671,000	41,400
Molybdenum chemicals:						
Oxides and hydroxides	211,000	NA	8,020	21,300	NA	753
Molybdates of ammonium	915,000	515,000	30,400	59,000	33,300	1,640
Molybdates (all others)	179,000	51,400	2,190	1,070	456	23
Molybdenum orange	600,000	NA	4,040	49,700	NA	381
Ferromolybdenum	6,360,000	4,100,000	270,000	639,000	421,000	29,600
Molybdenum powders	72,900	60,800	4,990	18,400	16,000	1,310
Molybdenum unwrought	117,000	117,000	7,460	10,200	10,200	705
Molybdenum waste and scrap	574,000	554,000	34,800	51,700	48,100	2,510
Molybdenum wire	17,900	NA	2,740	1,080	NA	230
Molybdenum other	164,000	NA	20,900	17,200	NA	2,130
Total	32,900,000	XX	938,000	3,330,000	XX	99,900

NA Not available. XX Not applicable.

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

²Customs value.

Source: U.S. Census Bureau.