

Mineral Industry Surveys

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MOLYBDENUM IN JULY 2006

Domestic production of molybdenum in concentrate in July 2006 was about 12% more than that of the previous month and about 7% more than that of July 2005, according to the U.S. Geological Survey. Producer stocks of molybdenum in concentrate, oxide, and other product forms were about 7,630 metric tons (t) at the beginning of 2006, and about 5,900 t at the end of July.

According to Ryan's Notes (2006b), the July monthly average prices for U.S. ferromolybdenum (FeMo) ranged from \$27.000 to \$27.500 per pound of molybdenum content, compared with \$27.000 to \$27.611 in June. European FeMo monthly averages ranged from \$57.214 to \$58.500 per kilogram (kg) of molybdenum content in July compared with \$58.567 to \$59.400 per kg in June. In July, worldwide molybdenum oxide (MoO₃) prices ranged from \$24.757 to \$25.179 per pound versus \$25.000 to \$25.556 per pound in June.

A Jinduicheng Molybdenum Group Co. Ltd. (JDC) representative estimated that Chinese molybdenum consumption in 2006 would be about 20% higher than the 19,800 t consumed in 2005. Continued growth in molybdenum consumption in the steel industry, particularly in steel pipelines for domestic consumption, was given as the driving force. JDC, China's

leading molybdenum producer, forecast a 2006 production of about 10,900 t (24 million pounds) of molybdenum, about level with 2005 production (Platts Metals Week, 2006). A Phelps Dodge Corp. (PD) representative stated that the closed molybdenum mines in China's Huludao Region, Liaoning Province, were unlikely to reopen in 2006, but when they do their output would likely be below 2005 production levels. PD expected the molybdenum market to be nearly in balance in 2006 and that inventories would remain below normal (Ryan's Notes, 2006a).

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 June and July 2006. Export data for May and June 2006 and import data for June 2006 are also included.

References Cited

- Platts Metals Week, 2006, Chinese 2006 molybdenum use to rise at least 20%: Platts Metals Week, v. 77, no. 29, July 17, p. 4.
- Ryan's Notes, 2006a, PD sees 2006 moly prices at \$22-26: Ryan's Notes, v. 12, no. 30, July 31, p. 1.
- Ryan's Notes, 2006b, [untitled]: Ryan's Notes, v. 12, no. 31, August 7, p. 10.

TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS¹

(Metric tons, contained molybdenum)

	2005		2006		
	January- December ^p	January- July	June	July	January- July
Production	57,900	32,300	4,810 ^r	5,380	35,400
Shipments: ²					
Domestic	38,200	21,300	3,410	3,390	23,800
Export	19,400	10,800	1,560 ^r	1,580	11,600

^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)

	2005		2006		
	January- December ^p	January- July	June ^r	July	January- July
Gross production	78,500	47,300	6,860	5,470	46,500
Internal consumption ²	48,700	30,300	4,460	3,520	29,200
Gross shipments	46,700	27,900	4,220	3,390	29,800

^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	Molybdic oxides	Ferro molybdenum ²	Ammonium and sodium molybdate	Molybdenum scrap	Other	Total
2006, June:						
Steel:						
Carbon	12,900	W	--	--	W	12,900
High-strength low-alloy	36,100	8,930	--	--	11,300	56,400
Stainless and heat-resisting	175,000	64,600	--	W	6,510	246,000
Full alloy	173,000	246,000	--	--	1,510	420,000
Tool	49,600	W	--	--	--	49,600
Total	447,000	319,000	--	W	19,400	786,000 ^r
Cast irons (gray, malleable, and ductile iron)	W	8,500	--	--	763	9,260
Superalloys	77,100	W	--	(3)	133,000	210,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	73	3,170	--	--	--	3,240
Mill products made from metal powder ⁴	--	--	--	--	176,000 ^r	176,000 ^r
Cemented carbides and related products ⁵	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	777	777
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	11,100	11,100
Other	2,900	30,900	72,700 ^r	1,840	16,800	125,000 ^r
Grand total	604,000	362,000	72,700 ^r	1,840	357,000 ^r	1,400,000 ^r
Stocks, June 30, 2006	535,000	211,000 ^r	3,510 ^r	23,600	851,000	1,620,000 ^r
2006, July:						
Steel:						
Carbon	12,700	W	--	--	W	12,700
High-strength low-alloy	35,400	9,050	--	--	11,300	55,800
Stainless and heat-resisting	171,000	64,300	--	W	6,510	242,000
Full alloy	168,000	131,000	--	--	1,510	300,000
Tool	49,900	W	--	--	--	49,900
Total	437,000	204,000	--	W	19,400	660,000
Cast irons (gray, malleable, and ductile iron)	W	7,730	--	--	763	8,490
Superalloys	69,800	W	--	(3)	127,000	197,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	94	3,110	--	--	--	3,200
Mill products made from metal powder ⁴	--	--	--	--	179,000	179,000
Cemented carbides and related products ⁵	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	294	294
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	10,700	10,700
Other	1,090	29,200	72,700	1,840	16,800	122,000
Grand total	585,000	244,000	72,700	1,840	355,000	1,260,000
Stocks, July 31, 2006	428,000	181,000	3,510	17,900	847,000	1,480,000

^rRevised. 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, metalworking machinery.

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

(Kilograms, contained molybdenum)

Country	2005		2006		
	January- December	January- June	May	June	January- June
Australia	110,000	91,400	--	--	7,350
Austria	3,230	2,590	--	--	--
Belgium	9,430,000	2,580,000	495,000	433,000	4,120,000
Brazil	66,700	66,100	--	20,000	36,900
Canada	3,840,000	2,220,000	237,000	275,000	1,570,000
Chile	177,000	111,000	23,000	--	91,800
China	4,390,000	2,420,000	8,570	--	398,000
Costa Rica	3,810	3,810	--	--	--
India	41,100	34,400	--	--	2,170
Italy	35,100	35,100	--	--	--
Japan	2,050,000	934,000	251,000	236,000	1,180,000
Korea, Republic of	11,700	11,400	--	--	11,000
Mexico	3,130,000	1,070,000	522,000	544,000	2,770,000
Netherlands	15,000,000	8,980,000	861,000	818,000	5,230,000
Taiwan	3,600	3,600	--	122	608
United Kingdom	7,310,000	3,720,000	688,000	469,000	3,890,000
Other	767,000	599,000	--	--	38,500
Total	46,400,000	22,900,000	3,090,000	2,790,000	19,300,000

-- 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	2005		2006		
	January- December	January- June	May	June	January- June
Argentina	--	--	--	--	14,500
Australia	--	--	--	24,100	24,100
Austria	11,400	--	--	--	--
Brazil	17,200	16,600	--	--	37,300
Canada	1,930,000	1,210,000	492,000	444,000	1,440,000
Denmark	--	--	--	--	57
India	--	--	--	--	166
Indonesia	5,930	5,930	--	--	--
Japan	--	--	--	--	60
Mexico	88,700	4,940	39,200	28,000	134,000
Netherlands	33,300	33,300	--	--	--
Singapore	--	--	--	1,630	1,630
Switzerland	--	--	--	--	12,000
Total	2,090,000	1,270,000	531,000	498,000	1,660,000

-- Zero.

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

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

(Kilograms, unless otherwise specified)

Material	January-December 2005			June 2006			January-June 2006		
	Gross weight	Contained molybdenum	Value ² (thousands)	Gross weight	Contained molybdenum	Value ² (thousands)	Gross weight	Contained molybdenum	Value ² (thousands)
Ore and concentrates roasted	8,570,000	5,380,000	\$306,000	870,000	525,000	\$13,000	5,710,000	3,500,000	\$88,700
Ore and concentrates other	13,800,000	6,480,000	440,000	583,000	281,000	14,700	5,500,000	2,570,000	118,000
Molybdenum chemicals:									
Oxides and hydroxides	1,240,000	NA	42,500	52,800	NA	2,250	397,000	NA	15,200
Molybdates of ammonium	4,220,000	2,730,000	53,600	140,000	78,800	3,030	926,000	553,000	19,800
Molybdates (all others)	101,000	24,800	1,250	11,500	2,530	144	94,200	17,200	1,060
Molybdenum orange	983,000	NA	4,780	94,200	NA	711	408,000	NA	2,770
Ferromolybdenum	6,340,000	4,040,000	278,000	328,000	209,000	11,500	2,700,000	1,710,000	88,400
Molybdenum powders	92,900	78,500	7,740	27,800	27,700	1,690	57,700	53,100	4,520
Molybdenum unwrought	99,000	98,800	5,750	35,900	35,700	1,990	121,000	121,000	6,610
Molybdenum waste and scrap	503,000	480,000	35,600	57,700	55,700	3,570	271,000	266,000	17,000
Molybdenum wire	21,300	NA	3,160	1,480	NA	176	7,650	NA	1,090
Molybdenum other	163,000	NA	20,700	5,650	NA	992	82,600	NA	9,200
Total	36,200,000	19,300,000	1,200,000	2,210,000	1,220,000	53,700	16,300,000	8,780,000	372,000

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.