Mineral Industry Surveys

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VANADIUM IN JUNE 2006

Reported domestic consumption of vanadium in June 2006 was slightly less than that of the previous month, and was about 14% more than that of June 2005, according to the U.S. Geological Survey. Consumer stocks of vanadium, in all forms, were 361 metric tons (t) at the beginning of 2006 and 353 t at the end of June.

According to Ryan's Notes (2006), U.S. ferrovanadium (FeV) prices ranged from $20.194 to $20.889 per pound of vanadium content in June, as compared with $19.556 to $20.056 in May. European FeV prices ranged from $38.444 to $40.000 per kilogram in June, as compared with $40.000 to $42.000 in May. Vanadium pentoxide (V_2O_5) prices ranged from $8.133 to $8.433 per pound in June, as compared with $8.178 to $8.467 in May.

British Virgin Islands-based Ferro-Alloy Resources, Ltd. (FRL) announced it would begin construction on a small-scale vanadium recovery plant in southern Kazakhstan in June 2006. The initial plan called for processing 100,000 t of ore by the end of the first quarter of 2007, followed by an evaluation of process efficiency. If successful, FRL would issue an initial public offering in the first half of 2007 to fund construction of the second stage of the project, estimated to cost about $30 million. The company estimated a potential annual production capacity of about 7,000 t of V_2O_5 upon full completion of the project (Metal Bulletin, 2006).

References Cited

Metal Bulletin, 2006, Ferro-alloy Resources targets vanadium production in Kazakhstan: Metal Bulletin, no. 8948, June 12, p. 16.
Ryan's Notes, 2006, [untitled]: Ryan's Notes, v. 12, no. 26, July 3, p. 10.

TABLE 1

U.S. CONSUMPTION AND CONSUMER STOCKS OF VANADIUM, BY FORM[1]

(Kilograms, contained vanadium)

	2005[p]		2006			
			May		June	
	Consumption	Stocks	Consumption	Stocks	Consumption	Stocks
Ferrovanadium[2]	3,430,000	335,000	308,000 r	334,000 r	298,000	337,000
Vanadium-aluminum alloy	W	W	W	W	W	W
Other[3]	260,000	25,700	22,100	26,900	27,400	16,100
Total	3,690,000	361,000	330,000 r	361,000	325,000	353,000

[p]Preliminary. [r]Revised. W Withheld to avoid disclosing company proprietary data; included with "Other."

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

[2]Includes other vanadium-iron-carbon alloys as well as vanadium oxides added directly to steel.

[3]Includes other vanadium alloys, vanadium metal, vanadium pentoxide, vanadates, chlorides, other specialty chemicals, and items indicated by symbol W.

TABLE 2

U.S. CONSUMPTION OF VANADIUM, BY END USE[1]

(Kilograms, contained vanadium)

		2006		
	2005[p]	May	June	Year to date
Steel:				
Carbon	902,000	88,000	86,600	479,000
High-strength low-alloy	1,060,000	91,300	89,700	520,000
Stainless and heat-resisting	59,900	5,060	5,060	30,300
Full alloy	1,000,000	91,200 r	90,200	536,000
Tool	401,000	31,800	25,900	159,000
Total steel	3,430,000	307,000 r	297,000	1,720,000
Superalloys	9,610	350 r	527	2,180
Miscellaneous and unspecified[2]	253,000	21,900	27,200	137,000
Total consumption	3,690,000	330,000 r	325,000	1,860,000

[p]Preliminary. [r]Revised.

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

[2]Includes cast irons, alloys excluding steel and superalloys, chemical and ceramic uses, and other miscellaneous and unspecified uses.

TABLE 3
U.S. IMPORTS AND EXPORTS OF ALUMINUM-VANADIUM MASTER ALLOY AND VANADIUM METAL, INCLUDING WASTE AND SCRAP[1]

(Kilograms, gross weight)

	Aluminum-vanadium master alloy		Vanadium metal, including waste and scrap	
	Quantity	Value	Quantity	Value
Imports for consumption:				
2005	1,010	$15,500	54,800	$3,800,000
2006:				
March	--	--	116	81,600
April	--	--	21,100	807,000
May:				
China	--	--	120	5,500
Germany	--	--	5,220	189,000
Russia	--	--	256	44,600
Total	--	--	5,590	239,000
Year to date	--	--	31,600	1,730,000
Exports:				
2005	14,100,000	42,000,000	293,000	1,640,000
2006:				
March	2,100,000	6,720,000	18,000	873,000
April	2,580,000	7,690,000	138,000	995,000
May:				
Austria	--	--	3,830	102,000
Australia	2,290	24,000	--	--
Belgium	24,200	315,000	--	--
Brazil	1,270	31,900	--	--
Cameroon	--	--	959	37,000
Canada	16,500	35,900	--	--
China	30,000	165,000	--	--
Germany	5,520	71,700	1,800	26,000
India	12,000	63,100	--	--
Italy	--	--	92	3,540
Japan	--	--	16,400	656,000
Korea, Republic of	2,180	13,600	--	--
Malaysia	8,800	48,000	--	--
Mexico	733,000	3,150,000	--	--
Thailand	21,700	104,000	--	--
United Kingdom	--	--	23,300	796,000
Total	857,000	4,030,000	46,400	1,620,000
Year to date	10,800,000	27,700,000	253,000	5,830,000

-- Zero.

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

Source: U.S. Census Bureau.

TABLE 4
U.S. IMPORTS AND EXPORTS OF FERROVANADIUM, VANADIUM PENTOXIDE (ANHYDRIDE) AND OTHER OXIDES AND HYDROXIDES OF VANADIUM[1]

(Kilograms, contained vanadium)

	Ferrovanadium		Vanadium pentoxide (anhydride)[2]		Other oxides and hydroxides of vanadium	
	Quantity	Value	Quantity	Value	Quantity	Value
Imports for consumption:						
2005	12,000,000	$131,000,000	1,410,000	$52,900,000	213,000	$6,540,000
2006:						
March	146,000	6,290,000	275,000	6,880,000	31,700	967,000
April	175,000	7,430,000	137,000	3,350,000	34,000	535,000
May:						
Austria	8,070	319,000	--	--	--	--
Canada	61,300	2,990,000	--	--	--	--
China	--	--	51,300	1,400,000	--	--
Czech Republic	160,000	6,410,000	--	--	--	--
Korea, Republic of	38,000	1,730,000	--	--	--	--
South Africa	--	--	160,000	3,080,000	--	--
Total	268,000	11,400,000	211,000	4,470,000	--	--
Year to date	940,000	41,700,000	974,000	31,300,000	72,600	1,940,000
Exports:						
2005	500,000	19,100,000	247,000	5,340,000	822,000	14,500,000
2006:						
March	53,300	1,740,000	63,900	1,360,000	116,000	1,040,000
April	56,300	1,170,000	36,200	773,000	134,000	1,000,000
May:						
Austria	--	--	4,810	171,000	--	--
Canada	21,500	475,000	--	--	55,300	496,000
Germany	--	--	1,130	45,900	1,900	22,400
Italy	--	--	16,200	348,000	--	--
Mexico	2,900	109,000	8,110	77,000	--	--
Netherlands	29,100	1,140,000	--	--	--	--
Russia	--	--	18,000	350,000	--	--
Spain	--	--	11,100	189,000	--	--
Total	53,400	1,720,000	59,300	1,180,000	57,200	518,000
Year to date	230,000	6,590,000	199,000	4,190,000	416,000	4,120,000

-- Zero.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]May include catalysts containing vanadium pentoxide.

Source: U.S. Census Bureau.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF VANADIUM-BEARING ASH, SLAG[1]

(Kilograms, contained vanadium pentoxide)

	Ash and residues		Ash and residues (not from the manufacture of iron and steel)	
	Quantity	Value	Quantity	Value
2005	4,360,000	$9,820,000	6,850,000	$1,100,000
2006:				
March	22,700	263,000	107,000	96,400
April	--	--	103,000	96,000
May, Canada	--	--	92,400	97,500
Year to date	128,000	1,450,000	545,000	526,000

-- Zero.
[1]Data 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 MISCELLANEOUS VANADIUM CHEMICALS[1]

(Kilograms, contained vanadium)

	Sulfates		Vanadates	
	Quantity	Value	Quantity	Value
2005	35,000	$77,000	91,700	$2,800,000
2006:				
March	--	--	12,600	384,000
April	--	--	6,430	465,000
May:				
Germany	--	--	5,640	150,000
India	4	8,460	--	--
Japan	--	--	30	4,370
South Africa	--	--	11,000	187,000
Total	4	8,460	16,700	341,000
Year to date	4	8,460	68,400	2,100,000

-- Zero.

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

Source: U.S. Census Bureau.