

Mineral Industry Surveys

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VANADIUM IN MARCH 2007

Reported domestic consumption of vanadium in March 2007 was about 14% more than that of the previous month, and was about 21% more than that of March 2006, according to the U.S. Geological Survey. Consumer stocks of vanadium, in all forms, were 296 metric tons (t) at the beginning of 2007 and 342 t at the end of March.

According to Ryan's Notes (2007b), U.S. ferrovanadium (FeV) prices ranged from \$17.806 to \$18.433 per pound of vanadium content in March, as compared with \$15.325 to \$15.675 in February. European FeV prices ranged from \$37.444 to \$39.444 per kilogram in March, as compared \$32.625 to \$34.125 in February. Vanadium pentoxide (V₂O₅) prices ranged from \$6.778 to \$7.033 per pound in March, as compared with \$6.125 to \$6.388 in February.

A spokesman for Xstrata Alloys Ltd. (Rustenburg, South Africa) stated that although vanadium prices had retreated from

the record highs of 2005, he expected prices would remain well above long-term averages through 2007. Fairly strong economic conditions in Europe, North America, and especially China, should lead to continued strong demand for vanadium, as these areas combine for about 70% of worldwide vanadium consumption. Plans for a brownfield expansion to increase production capacity at the Rhovan facility by 8.5 million pounds per year of vanadium pentoxide, were expected to be presented to Xstrata's Board of Directors by the end of 2007 (Ryan's Notes, 2007a).

References Cited

Ryan's Notes, 2007a, Xstrata sees healthy V demand in 2007: Ryan's Notes, v. 13, no. 11, March 12, p. 4-5.
Ryan's Notes, 2007b, [untitled]: Ryan's Notes, v. 13, no. 14, April 2, p. 10.

TABLE 1
U.S. CONSUMPTION AND CONSUMER STOCKS OF VANADIUM, BY FORM¹

(Kilograms, contained vanadium)

	2006 ^P		2007					
	Consumption	Stocks	February		March		January-March	
			Consumption	Stocks	Consumption	Stocks	Consumption	Stocks
Ferrovandium ²	3,350,000	247,000	287,000	256,000	299,000	287,000	858,000	287,000
Vanadium-aluminum alloy	W	W	W	W	W	W	W	W
Other ³	298,000	48,100	40,300	46,600	73,000	54,900	176,000	54,900
Total	3,650,000	296,000	327,000	303,000	372,000	342,000	1,030,000	342,000

^PPreliminary. W Withheld to avoid disclosing company proprietary data; included with "Other."

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

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

³Includes 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 USE¹

(Kilograms, contained vanadium)

	2006 ^P	2007		
		February	March	Year to date
Steel:				
Carbon	931,000	86,800	87,300	244,000
High-strength low-alloy	1,020,000	87,100	106,000	286,000
Stainless and heat-resisting	60,700	5,110	5,110	15,300
Full alloy	1,020,000	90,900	101,000	284,000
Tool	322,000	32,300	44,400	111,000
Total steel	3,350,000	302,000	344,000	940,000
Superalloys	4,130	386	660	1,510
Miscellaneous and unspecified ²	296,000	24,600	27,300	92,100
Total consumption	3,650,000	327,000	372,000	1,030,000

^PPreliminary.

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

²Includes 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 SCRAP¹

(Kilograms, gross weight)

	Aluminum-vanadium master alloy		Vanadium metal, including waste and scrap	
	Quantity	Value	Quantity	Value
Imports for consumption:				
2006	102,000	\$312,000	121,000	\$5,270,000
2007:				
January	--	--	--	--
February:				
Total	--	--	--	--
Year to date	--	--	--	--
Exports:				
2006	17,000,000	54,500,000	491,000	3,160,000
2007:				
January	1,880,000	5,130,000	--	--
February:				
Belgium	57,400	746,000	--	--
Canada	602,000	1,970,000	--	--
China	35,800	163,000	--	--
Japan	13,500	398,000	--	--
Malaysia	1,310	7,430	--	--
Mexico	443,000	1,270,000	--	--
Thailand	5,810	30,900	--	--
Total	1,160,000	4,590,000	--	--
Year to date	3,040,000	9,720,000	--	--

-- Zero.

¹Data 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 VANADIUM¹

(Kilograms, contained vanadium)

	Ferrovanadium		Vanadium pentoxide (anhydride) ²		Other oxides and hydroxides of vanadium	
	Quantity	Value	Quantity	Value	Quantity	Value
Imports for consumption:						
2006	2,140,000	\$90,500,000	1,920,000	\$45,200,000	129,000	\$3,370,000
2007:						
January	256,000	5,960,000	81,700	2,020,000	--	--
February:						
Austria	19,900	526,000	--	--	--	--
Canada	25,300	651,000	--	--	--	--
China	--	--	40,900	835,000	--	--
Czech Republic	160,000	4,360,000	--	--	--	--
Japan	--	--	279	23,700	--	--
Korea	50,400	1,230,000	--	--	--	--
South Africa	--	--	120,000	2,270,000	--	--
Total	256,000	6,770,000	162,000	3,130,000	--	--
Year to date	512,000	12,700,000	243,000	5,150,000	--	--
Exports:						
2006	389,000	11,400,000	341,000	7,150,000	832,000	7,780,000
2007:						
January	5,200	219,000	2,000	43,400	3,090	15,600
February:						
Argentina	--	--	500	20,900	--	--
Australia	227	10,400	--	--	--	--
Brazil	--	--	--	--	2,720	40,000
Canada	6,940	273,000	--	--	1,690	26,000
Germany	--	--	--	--	6,540	91,100
Mexico	2,560	90,300	--	--	--	--
Russia	--	--	18,000	313,000	--	--
Total	9,730	373,000	18,500	334,000	11,000	157,000
Year to date	14,900	592,000	20,500	377,000	14,000	173,000

-- Zero.

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

²May include catalysts containing vanadium pentoxide.

Source: U.S. Census Bureau.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF VANADIUM-BEARING ASH, SLAG¹

(Kilograms, contained vanadium pentoxide)

	Ash and residues		Ash and residues (not from the manufacture of iron and steel)	
	Quantity	Value	Quantity	Value
2006	637,000 [†]	\$7,320,000	1,140,000	\$1,130,000
2007:				
January	36,400 [†]	431,000	85,100 [†]	116,000
February:				
Canada	--	--	41,700	57,900
Mexico	59,100	590,000	--	--
Total	59,100	590,000	41,700	57,900
Year to date	95,400	1,020,000	127,000	174,000

[†]Revised. -- 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 MISCELLANEOUS VANADIUM CHEMICALS¹

(Kilograms, contained vanadium)

	Sulfates		Vanadates	
	Quantity	Value	Quantity	Value
2006	16	\$26,700	115,000	\$3,330,000
2007:				
January	40,000	373,000	16,800	342,000
February:				
China	20,200	193,000	--	--
Germany	--	--	291	25,500
Total	20,200	193,000	291	25,500
Year to date	60,200	565,000	17,100	367,000

-- Zero.

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

Source: U.S. Census Bureau.