

# Mineral Industry Surveys

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## VANADIUM IN APRIL 2010

Reported domestic consumption of vanadium in April 2010 was 6% less than that of the previous month, and was about 4% more than that of April 2009, according to the U.S. Geological Survey. Consumer stocks of vanadium, in all forms, were 278 metric tons (t) at the beginning of 2010 and 242 t at the end of April.

According to Ryan's Notes, U.S. ferrovanadium (FeV) prices ranged from \$16.233 to \$16.778 per pound of vanadium content in April, as compared with \$15.028 to \$15.611 in March. European FeV prices ranged from \$33.111 to \$34.111 per kilogram in April, as compared with \$32.389 to \$33.389 in March. Vanadium pentoxide ( $V_2O_5$ ) prices ranged from \$7.000 to \$7.250 per pound in April, as compared with \$6.417 to \$6.833 in March.

NiPlats Australia Ltd. (Perth, Australia), reported new mineral resources for its Speewah vanadium project in the East

Kimberley region of Western Australia to be 3.2 billion metric tons at an average grade of 0.30%  $V_2O_5$  based on a cutoff grade of 0.23%  $V_2O_5$ . According to the company, this would be Australia's largest vanadium deposit in magnetite. The company announced future plans to continue its feasibility studies for a potential open pit and downstream processing facility (NiPlats Australia Ltd., 2010).

### Reference Cited

NiPlats Australia Ltd., 2010, Quarterly activities report for the period ended 31 March 2010: Perth, Australia, NiPlats Australia Ltd., April 30. (Accessed September 15, 2010, at <http://www.niplats.com.au/media/articles/Investor---Announcements/20100729-QUARTERLY-ACTIVITIES-REPORT-30/2-niplats-qtrly-mar-10-final2.pdf>.)

TABLE 1  
U.S. CONSUMPTION AND CONSUMER STOCKS OF VANADIUM, BY FORM<sup>1</sup>

(Kilograms, contained vanadium)

	2009		2010					
			March		April		January-April	
	Consumption	Stocks	Consumption	Stocks	Consumption	Stocks	Consumption	Stocks
Ferrovandium <sup>2</sup>	4,030,000	227,000	368,000	198,000	339,000	191,000	1,370,000	XX
Vanadium-aluminum alloy	W	W	(3)	(3)	(3)	(3)	(3)	XX
Other <sup>4</sup>	694,000	51,700	(3)	(3)	(3)	(3)	(3)	XX
Total	4,720,000	278,000	428,000	252,000	403,000	242,000	1,600,000	XX

W Withheld to avoid disclosing company proprietary data; included with "Other." XX Not applicable.

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

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

<sup>3</sup>Withheld to avoid disclosing company proprietary data; included in "Total."

<sup>4</sup>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<sup>1</sup>

(Kilograms, contained vanadium)

	2009	2010		
		March	April	January-April
<b>Steel:</b>				
Carbon	610,000	54,300	60,300	218,000
High-strength low-alloy	1,540,000	W	W	W
Stainless and heat-resisting	119,000	W	5,110	54,000
Full alloy	1,880,000	158,000	157,000	630,000
Tool	417,000	W	W	W
Total steel	4,570,000	212,000	222,000	902,000
Superalloys	5,410	231	406	1,380
Miscellaneous and unspecified <sup>2</sup>	151,000	W	W	W
Total consumption	4,720,000	428,000	403,000	1,600,000

W Withheld to avoid disclosing company proprietary data; included in "Total consumption."

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

<sup>2</sup>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<sup>1</sup>

(Kilograms, gross weight)

	Aluminum-vanadium master alloy		Vanadium metal, including waste and scrap	
	Quantity	Value	Quantity	Value
<b>Imports for consumption:</b>				
2009	282,000	\$979,000	21,700	\$940,000
2010:				
February	--	--	--	--
March:				
Germany	--	--	3,910	132,000
Netherlands	4,950	15,300	--	--
Total	4,950	15,300	3,910	132,000
Year to date	218,000	499,000	3,910	132,000
<b>Exports:</b>				
2009	11,200,000	27,800,000	22,700	1,040,000
2010:				
February	1,350,000	3,640,000	80	3,080
March:				
Belgium	16,300	485,000	--	--
Canada	496,000	1,140,000	--	--
India	1,430	9,600	--	--
Japan	5,900	173,000	--	--
Malaysia	478	6,220	--	--
Mexico	207,000	656,000	--	--
Russia	793	8,040	--	--
United Arab Emirates	92,100	405,000	--	--
United Kingdom	901	8,640	--	--
Total	821,000	2,890,000	--	--
Year to date	2,750,000	7,900,000	80	3,080

-- Zero.

<sup>1</sup>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<sup>1</sup>

(Kilograms, contained vanadium)

	Ferrovanadium		Vanadium pentoxide (anhydride) <sup>2</sup>		Other oxides and hydroxides of vanadium	
	Quantity	Value	Quantity	Value	Quantity	Value
<b>Imports for consumption:</b>						
2009	353,000	\$12,600,000	1,120,000	\$16,500,000	25,200	\$551,000
<b>2010:</b>						
February	28,100	799,000	328,000	3,890,000	--	--
<b>March:</b>						
Austria	80,300	2,300,000	--	--	--	--
Canada	28,900	873,000	--	--	--	--
Germany	362	21,700	--	--	--	--
India	542	35,600	--	--	--	--
Korea, Republic of	14,700	372,000	--	--	--	--
Russia	--	--	208,000	2,310,000	--	--
South Africa	--	--	149,000	1,700,000	--	--
United Kingdom	--	--	3,000	39,700	--	--
Total	125,000	3,600,000	359,000	4,050,000	--	--
Year to date	211,000	5,830,000	948,000	11,300,000	--	--
<b>Exports:</b>						
2009	971,000	15,000,000	401,000	4,970,000	506,000	5,270,000
<b>2010:</b>						
February	75,000	1,470,000	23,100	335,000	74,800	797,000
<b>March:</b>						
Argentina	--	--	--	--	19,000	149,000
Canada	53,900	988,000	--	--	31,500	281,000
<b>China</b>	--	--	--	--	<b>27,000</b>	<b>240,000</b>
Colombia	441	7,390	--	--	--	--
Japan	--	--	--	--	558	4,970
Mexico	3,100	76,400	--	--	414	3,690
Netherlands	--	--	--	--	20,800	185,000
Pakistan	--	--	1,100	18,000	--	--
Total	57,400	1,070,000	1,100	18,000	99,300	864,000
Year to date	246,000	4,210,000	49,700	800,000	253,000	2,390,000

-- Zero.

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

<sup>2</sup>May include catalysts containing vanadium pentoxide.

Source: U.S. Census Bureau.

TABLE 5  
U.S. IMPORTS FOR CONSUMPTION OF VANADIUM-BEARING ASH, SLAG<sup>1</sup>

(Kilograms, contained vanadium pentoxide, unless otherwise specified)

	Ash and residues		Ash and residues (not from the manufacture of iron and steel)		Slag, from the manufacture of iron and steel	
	Quantity	Value	Quantity	Value	Quantity (gross weight)	Value
2009	791,000	\$12,300,000	615,000	1,260,000	80,500,000	\$2,610,000
2010:						
February	83,600	465,000	38,700	221,000	202,000	72,200
March:						
Canada	--	--	26,000	78,800	65,600	21,400
Germany	--	--	--	--	15,100	2,140
Mexico	54,500	1,190,000	--	--	--	--
Total	54,500	1,190,000	26,000	78,800	80,700	23,500
Year to date	156,000	2,040,000	160,000	470,000	413,000	166,000

-- Zero.

<sup>1</sup>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<sup>1</sup>

(Kilograms, contained vanadium)

	Sulfates		Vanadates	
	Quantity	Value	Quantity	Value
2009	16,500	\$182,000	214,000	\$3,390,000
2010:				
February	6,670	64,100	16,200	415,000
March:				
China	4,760	45,800	--	--
Japan	--	--	53	18,900
South Africa	--	--	17,400	254,000
Total	4,760	45,800	17,500	273,000
Year to date	11,500	119,000	44,700	877,000

-- Zero.

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

Source: U.S. Census Bureau.