

Mineral Industry Surveys

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VANADIUM IN APRIL 2011

Reported domestic consumption of vanadium in April 2011 was 5% less than that of the previous month, and was about 7% more than that of April 2010, according to the U.S. Geological Survey. Consumer stocks of vanadium, in all forms, were 204 metric tons (t) at the beginning of 2011 and 188 t at the end of April.

According to Ryan's Notes, U.S. ferrovanadium (FeV) prices ranged from \$14.867 to \$15.289 per pound of vanadium content in April, as compared with \$14.333 to \$14.750 in March. European FeV prices ranged from \$30.500 to \$31.500 per kilogram in April, as compared with \$30.500 to \$31.500 in March. Vanadium pentoxide (V_2O_5) prices ranged from \$6.556 to \$7.056 per pound in April, as compared with \$6.917 to \$7.417 in March.

Evraz Group S.A., the Russia-based steelmaker and vanadium producer, announced that its first quarter FeV production increased 3.8% to 4,021 t FeV, and FeV production was 33.2% higher than the last quarter of 2010. According to the company, the restart of slag processing in China during the first quarter of 2011 has increased the amount of V_2O_5 available for processing, enabling all of its vanadium production sites to run at maximum capacity (Metal-Pages, 2011).

Reference Cited

Metal-Pages, 2011, Evraz Q1 ferro-vanadium output up 4%: Metal-Pages, April 15. (Accessed June 28, 2011, via <http://www.metal-pages.com/>.)

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

(Kilograms, contained vanadium)

	2010 ^p		2011					
			March		April		January–April	
	Consumption	Stocks	Consumption	Stocks	Consumption	Stocks	Consumption	Stocks, end of period
Ferrovandium ²	3,800,000 ^r	135,000 ^r	337,000 ^r	100,000 ^r	332,000	120,000	1,300,000	120,000
Vanadium-aluminum alloy	W	W	(3)	51,800 ^r	(3)	51,600	(3)	51,600
Other ⁴	786,000 ^r	52,200 ^r	(3)	(5)	(3)	(5)	(3)	(5)
Total	4,590,000	187,000	420,000 ^r	152,000 ^r	400,000	172,000	1,590,000	172,000

^pPreliminary. ^rRevised. 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.

³Withheld to avoid disclosing company proprietary data; included in "Total."

⁴Includes other vanadium alloys, vanadium metal, vanadium pentoxide, vanadates, chlorides, other specialty chemicals, and items indicated by symbol W.

⁵Withheld to avoid disclosing company proprietary data; included in "Vanadium-aluminum alloy."

TABLE 2
U.S. CONSUMPTION OF VANADIUM, BY END USE¹

(Kilograms, contained vanadium)

	2010 ^p	2011		
		March	April	January–April
Steel:				
Carbon	663,000	64,400	56,400	232,000
High-strength low-alloy	1,530,000	W	W	W
Stainless and heat-resisting	120,000	5,110	5,110	20,600
Full alloy	1,970,000	178,000	180,000	692,000
Tool	62,600 ^r	W	W	W
Total steel	4,340,000	247,000	241,000	945,000
Superalloys	6,840 ^r	958 ^r	W	4,920
Miscellaneous and unspecified ²	242,000	W	W	W
Total consumption	4,590,000 ^r	420,000 ^r	400,000	1,590,000

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

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:				
2010	9,200,000	\$20,200,000	9,660	\$434,000
2011:				
February	80,500	238,000	3,800	502,000
March:				
Belgium	9,000	49,300	--	--
China	7,000	38,500	--	--
Germany	--	--	22,100	680,000
Total	16,000	87,800	22,100	680,000
January–March	1,230,000	3,100,000	26,000	1,200,000
Exports:				
2010	11,900,000	33,300,000	21,200	671,000
2011:				
February	772,000	2,310,000	8,750	361,000
March:				
Canada	58,000	173,000	--	--
China	174	5,110	--	--
India	19,000	177,000	--	--
Israel	2,230	32,100	--	--
Japan	2,660	78,200	2,160	83,200
Mexico	330,000	1,110,000	--	--
Trinidad and Tobago	107,000	611,000	--	--
United Kingdom	9,980	279,000	--	--
Total	530,000	2,470,000	2,160	83,200
January–March	2,330,000	8,050,000	11,000	449,000

-- 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:						
2010	1,340,000	\$41,100,000	4,000,000	\$53,700,000	167,000	\$3,330,000
2011:						
February	99,500	2,140,000	209,000	3,230,000	48,400	858,000
March:						
Austria	15,600	457,000	--	--	8,380	230,000
Canada	85,100	2,500,000	--	--	--	--
China	--	--	8,470	216,000	--	--
Germany	766	44,600	--	--	--	--
Russia	--	--	395,000	4,720,000	--	--
South Africa	--	--	57,900	1,370,000	40,200	667,000
Taiwan	--	--	7,240	217,000	--	--
Total	101,000	3,000,000	469,000	6,520,000	48,500	897,000
January–March	279,000	7,370,000	1,000,000	13,600,000	145,000	2,650,000
Exports:						
2010	882,000	18,100,000	140,000	2,140,000	1,100,000	10,600,000
2011:						
February	67,800	1,290,000	18,100	260,000	20,300	230,000
March:						
Brazil	--	--	18,000	251,000	--	--
Canada	28,400	640,000	--	--	--	--
Mexico	--	--	396	10,600	--	--
Total	28,400	640,000	18,400	262,000	--	--
January–March	158,000	3,160,000	36,500	524,000	22,600	250,000

-- 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, 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
2010	521,000	\$5,570,000	490,000	\$1,370,000	62,800,000	\$3,710,000
2011:						
February	47,800	35,100	22,900	117,000	47,600	12,900
March:						
Canada	55,900	34,700	--	--	19,200	12,600
Dominican Republic	--	--	--	--	15,200	24,400
Germany	--	--	--	--	47,700	20,200
Macedonia	--	--	--	--	19,200,000	786,000
Mexico	--	--	--	--	18,000	5,490
Total	55,900	34,700	--	--	19,300,000	849,000
January–March	239,000	670,000	50,400	176,000	19,500,000	909,000

-- 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 MISCELLANEOUS VANADIUM CHEMICALS¹

(Kilograms, contained vanadium)

	Sulfates		Vanadates	
	Quantity	Value	Quantity	Value
2010	48,200	\$608,000	158,000	\$4,050,000
2011:				
February	22,700	500,000	5,770	143,000
March:				
China	7,210	83,300	100	124,000
Germany	--	--	247	18,700
India	--	--	99	4,750
Total	7,210	83,300	446	147,000
January–March	33,800	629,000	6,220	290,000

-- Zero.

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

Source: U.S. Census Bureau.