

Mineral Industry Surveys

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VANADIUM IN APRIL 2013

Reported domestic consumption of vanadium in April 2013 was 18% less than that of the previous month, and 10% less than that of April 2012, according to the U.S. Geological Survey. Consumer stocks of vanadium, in all forms, were 214 metric tons (t) at the beginning of 2013 and 221 t at the end of April.

According to Ryan's Notes, U.S. ferrovanadium (FeV) prices ranged from \$14.456 to \$14.889 per pound of vanadium content in April, as compared with \$14.800 to \$15.106 in March. European FeV prices ranged from \$29.167 to \$29.889 per kilogram in April, as compared with \$31.278 to \$32.111 in March. Vanadium pentoxide (V₂O₅) prices ranged from \$6.300 to \$6.500 per pound in April, as compared with \$6.356 to \$6.556 in March.

Japan's imports of FeV decreased 17% to 823 t in the first three months of 2013 compared with 990 t FeV in the first three months of 2012. Specifically, FeV imports from South Africa decreased 39% to 320 t in the first three months of 2013 compared with 520 t FeV in the same time period of 2012. In the first three months of 2013, FeV imports from the Republic of Korea also decreased 39% to 163 t compared with 265 t FeV in the same time period of 2012 (Ryan's Notes, 2013).

Reference Cited

Ryan's Notes, 2013, Ferroalloy notes: Ryan's Notes, v. 19, no. 18, May 6, p. 1.

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

(Kilograms, contained vanadium)

	2012 ^p		March ^r		2013		January–April	
	Consumption	Stocks, end of period	Consumption	Stocks, end of period	Consumption	Stocks, end of period	Consumption	Stocks, end of period
Ferrovandium ²	2,950,000	172,000	279,000	149,000	218,000	151,000	965,000	151,000
Vanadium-aluminum alloy and other forms ³	818,000	56,400	68,300	71,800	67,100	70,100	273,000	70,100
Total	3,770,000	228,000	347,000	221,000	285,000	221,000	1,240,000	221,000

^pPreliminary. ^rRevised.

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 vanadium-aluminum alloy, other vanadium alloys, vanadium metal, vanadium pentoxide, vanadates, chlorides, and other specialty chemicals.

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

(Kilograms, contained vanadium)

	2012 ^p	2013		
		March	April	January–April
Steel:				
Carbon	602,000	52,500	45,800	194,000
Full alloy	1,440,000	146,000	101,000	476,000
High-strength low-alloy	W	W	W	W
Stainless and heat resisting	61,500	4,940	4,930	19,800
Tool	W	W	W	W
Total steel	2,110,000	204,000	152,000	691,000
Superalloys	5,390	140 ^r	144	670
Miscellaneous and unspecified ²	W	W	W	W
Total	3,770,000	347,000 ^r	285,000	1,240,000

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

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)

	Unwrought aluminum-vanadium master alloy		Vanadium metal, including waste and scrap	
	Quantity	Value	Quantity	Value
Imports for consumption:				
2012	103,000	\$681,000	154,000	\$4,840,000
2013:				
March	27,300	93,800	--	--
April	--	--	--	--
January–April	27,300	93,800	4,090	126,000
Exports:				
2012	924,000 ^r	5,140,000 ^r	26,000	698,000
2013:				
March	231,000 ^r	1,400,000 ^r	--	--
April:				
Australia	234	3,040	--	--
Canada	80,700	209,000	--	--
Japan	4,270	35,400	25,000	714,000
Mexico	140,000	432,000	--	--
Romania	3,040	39,500	--	--
United Arab Emirates	239	3,110	--	--
Total	228,000	722,000	25,000	714,000
January–April ²	703,000	3,890,000	30,300	850,000

-- Zero.

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

²May include revisions to previous months' data.

Source: U.S. Census Bureau; data adjusted by the U.S. Geological Survey.

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:						
2012	4,190,000	\$108,000,000	1,640,000	\$26,500,000	905,000	\$12,800,000
2013:						
March	445,000	11,500,000	90,400	1,530,000	--	--
April:						
Austria	24,800	826,000	--	--	16,700	454,000
Canada	62,200	1,850,000	--	--	--	--
China	--	--	23,800	350,000	--	--
Czech Republic	193,000	4,790,000	--	--	--	--
India	15,600	471,000	--	--	--	--
Japan	19,900	603,000	--	--	--	--
Korea, Republic of	21,700	666,000	--	--	--	--
Russia	--	--	--	--	141,000	1,080,000
South Africa	--	--	104,000	1,790,000	--	--
Taiwan	--	--	10,000	272,000	--	--
Total	337,000	9,200,000	138,000	2,410,000	158,000	1,530,000
January–April	1,340,000	34,900,000	559,000	8,710,000	166,000	1,710,000
Exports:						
2012	454,000	11,000,000	61,800	1,160,000	287,000	3,540,000
2013:						
March	30,900	802,000	14,400	225,000	160,000	1,520,000
April:						
Canada	7,600	194,000	--	--	234	3,020
Japan	--	--	1,180	37,900	--	--
Korea, Republic of	3,440	139,000	--	--	--	--
Mexico	23,400	263,000	--	--	--	--
Spain	--	--	8,700	128,000	--	--
Trinidad and Tobago	--	--	--	--	8,930	67,600
Total	34,400	596,000	9,880	166,000	9,160	70,600
January–April	191,000	4,370,000	25,600	443,000	203,000	1,960,000

-- 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
	2012	2,040,000	\$9,880,000	175,000	\$141,000	108,000,000
2013:						
March	398,000	2,450,000	--	--	181,000	1,700,000
April:						
Austria	--	--	--	--	7,440	121,000
Canada	314,000	1,900,000	--	--	99,500	51,100
Mexico	--	--	--	--	5,360	10,700
Netherlands	--	--	--	--	97,500	124,000
South Africa	--	--	--	--	40,000	637,000
Total	314,000	1,900,000	--	--	250,000	944,000
January–April	1,030,000	6,290,000	5,560	11,500	861,000	3,610,000

-- 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
2012	29,100	\$370,000	280,000	\$6,190,000
2013:				
March	--	--	10,700	324,000
April:				
Austria	--	--	121	2,210
China	4,780	46,000	--	--
India	--	--	32	3,150
South Africa	--	--	31,200	619,000
Total	4,780	46,000	31,300	624,000
January–April	10,800	89,600	117,000	2,370,000

-- Zero.

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

Source: U.S. Census Bureau.