

Mineral Industry Surveys

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VANADIUM IN FEBRUARY 2014

Reported domestic consumption of vanadium in February 2014 was slightly less than that of the previous month and was 6% less than that of February 2013. Consumer stocks of vanadium, in all forms, were 166 metric tons (t) at the beginning of 2014 and 158 t at the end of February.

According to Ryan's Notes, U.S. ferrovanadium (FeV) prices ranged from \$12.981 to \$13.488 per pound of vanadium content in February, compared with \$12.378 to \$12.906 in January. European FeV prices ranged from \$25.225 to \$25.725 per kilogram in February, compared with \$25.711 to \$26.189 in January. Vanadium pentoxide (V₂O₅) prices ranged from \$5.500 to \$6.000 per pound in both January and February.

Atlantic Ltd. announced that on February 4, there was a substantial fire at the beneficiation plant of its Windimurra

vanadium project in Western Australia. The beneficiation plant was not operating at the time of the fire and was undergoing planned maintenance work. No vanadium was produced in February owing to the planned shutdown in the first few days of the month and suspension of all vanadium production following the fire. Sales of vanadium in inventory from production prior to the fire continued throughout February. Windimurra produced a record of 142 t of FeV in December 2013 (Atlantic Ltd., 2014).

Reference Cited

Atlantic Ltd., 2014, Production & sales report: Perth, Western Australia, Australia, Atlantic Ltd., March 21, 4 p. (Accessed May 27, 2014, at <http://atlanticltd.com.au/upload/documents/InvestorRelations/asx/140321MonthlyProductionandSalesReport.pdf>.)

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

(Kilograms, contained vanadium)

	2013		2014					
	January–December		January		February		January–February	
	Consumption	Stocks	Consumption	Stocks	Consumption	Stocks	Consumption	Stocks
Ferrovandium ²	2,810,000	93,400	227,000	94,900 ^r	224,000	87,600	451,000	87,600
Vanadium-aluminum alloy and other forms ³	812,000	72,600	68,400	70,100	66,200	70,400	135,000	70,400
Total	3,620,000	166,000	295,000	165,000	290,000	158,000	586,000	158,000

^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)

	2013	2014		January–February
	January–December	January	February	
Steel:				
Carbon	518,000	41,700	42,500	84,200
Full alloy	1,430,000	122,000	118,000	240,000
High-strength low-alloy	W	W	W	W
Stainless and heat resisting	59,200	4,930	4,940	9,870
Tool	W	W	W	W
Total steel	2,010,000	168,000	165,000	334,000
Superalloys	2,810	140	186	325
Miscellaneous and unspecified ²	W	W	W	W
Total	3,620,000	295,000	290,000	586,000

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 ALLOYS AND VANADIUM
METAL, INCLUDING WASTE AND SCRAP¹

(Kilograms, gross weight)

	Aluminum-vanadium master alloy ²		Vanadium metal, including waste and scrap	
	Quantity	Value	Quantity	Value
Imports for consumption:				
2013	169,000	\$4,660,000	35,300	\$1,310,000
2014:				
January	9,990	291,000	998	194,000
February:				
Australia	19,500	408,000	--	--
Germany	--	--	8,250	235,000
Total	19,500	408,000	8,250	235,000
January–February	29,500	699,000	9,250	429,000
Exports:				
2013	347,000	9,800,000	57,500	1,700,000
2014:				
January	12,600 ^r	603,000 ^r	4,110	284,000
February:				
Belgium	10,600	250,000	--	--
Japan	1,230	51,700	--	--
Russia	50,900	1,340,000	--	--
United Kingdom	442	17,100	--	--
Total	63,100	1,660,000	--	--
January–February	75,800	2,270,000	4,110	284,000

^rRevised. -- Zero.

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

²Aluminum-vanadium master alloy consisting of 35% aluminum and 64.5% vanadium. Includes Harmonized. Tariff Schedule code 8112.99.2000.

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:						
2013	3,710,000	\$89,800,000	2,040,000	\$29,900,000	205,000	\$2,560,000
2014:						
January	342,000	7,920,000	112,000	2,220,000	16,700	395,000
February:						
Canada	52,200	1,500,000	--	--	--	--
Czech Republic	138,000	3,060,000	--	--	--	--
Germany	134	16,400	996	51,700	--	--
Japan	9,160	214,000	--	--	--	--
Korea, Republic of	23,900	591,000	--	--	--	--
Russia	8,000	205,000	132,000	1,110,000	--	--
South Africa	--	--	91,000	1,710,000	--	--
Taiwan	--	--	10,100	235,000	--	--
Total	232,000	5,580,000	234,000	3,110,000	--	--
January–February	574,000	13,500,000	346,000	5,340,000	16,700	395,000
Exports:						
2013	395,000	8,790,000	89,600	1,340,000	448,000	4,850,000
2014:						
January	56,100	712,000	25,000	467,000	2,580	23,800
February:						
Canada	18,300	405,000	--	--	--	--
Japan	--	--	--	--	5,280	87,300
Korea, Republic of	--	--	--	--	1,750	15,600
Netherlands	--	--	--	--	21,000	200,000
Thailand	--	--	200	7,300	--	--
Total	18,300	405,000	200	7,300	28,000	303,000
January–February	74,400	1,120,000	25,200	474,000	30,600	327,000

-- 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
2013	4,180,000	\$22,500,000	5,560	\$11,500	66,100,000	\$8,480,000
2014:						
January	462,000	2,420,000	--	--	27,400,000	599,000
February:						
Canada	304,000	1,740,000	--	--	183,000	34,400
Germany	5,010	10,900	--	--	--	--
Mexico	--	--	--	--	34,700	37,200
Russia	7,240	90,200	--	--	--	--
Total	316,000	1,840,000	--	--	218,000	71,700
January–February	778,000	4,260,000	--	--	27,600,000	671,000

-- 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
2013	29,500	\$306,000	276,000	\$5,700,000
2014:				
January	--	--	1,300	211,000
February:				
Austria	--	--	4,120	109,000
China	4,780	46,000	--	--
United Kingdom	--	--	8,940	215,000
Total	4,780	46,000	13,100	324,000
January–February	4,780	46,000	14,400	534,000

-- Zero.

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

Source: U.S. Census Bureau.