

Mineral Industry Surveys

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VANADIUM IN DECEMBER 2011

Reported domestic consumption of vanadium in December 2011 was 11% more than that of the previous month, and was 11% more than that of December 2010. Reported domestic consumption of vanadium in 2011 was slightly less than that of 2010. Consumer stocks of vanadium, in all forms, were 204 metric tons (t) at the beginning of 2011 and 168 t at yearend 2011.

Ryan's Notes U.S. ferrovanadium (FeV) prices ranged from \$13.194 to \$14.028 per pound of vanadium content in December, compared with \$13.875 to \$14.350 in November. European FeV prices ranged from \$23.833 to \$24.667 per kilogram in December, compared with \$26.063 to \$26.550 in November. Vanadium pentoxide (V_2O_5) prices ranged from \$6.083 to \$6.356 per pound in December, compared with \$6.500 to \$6.800 in November.

China's exports of V_2O_5 increased by 31% to 8,760 t V_2O_5 during the first 11 months of 2011 compared with those in the same period in 2010. China's main export destinations in the first 11 months of 2011 were the Republic of Korea (3,870 t V_2O_5), the Netherlands (1,440 t V_2O_5), Japan (1,240 t V_2O_5), Canada (980 t V_2O_5), and Germany (608 t V_2O_5) (Metal-Pages, 2012).

Reference Cited

Metal-Pages, 2012, China Jan-Nov vanadium pentoxide exports up 30.6%:
Metal-Pages, January 5. (Accessed February 15, 2012, via <http://www.metal-pages.com/>.)

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

(Kilograms, contained vanadium)

	2010		2011					
			November		December		January–December	
	Consumption	Stocks	Consumption	Stocks	Consumption	Stocks	Consumption	Stocks, end of period
Ferrovandium ²	4,210,000	187,000	333,000	113,000 ^r	342,000	104,000	4,050,000	104,000
Vanadium-aluminum alloy	W	W	(3)	(3)	(3)	(3)	(3)	(3)
Other ⁴	815,000	61,600	(3)	(3)	(3)	(3)	(3)	(3)
Total	5,030,000	248,000	404,000 ^r	172,000 ^r	449,000	168,000	4,920,000	168,000

^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.

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

(Kilograms, contained vanadium)

	2010	2011		
		November	December	January– December
Steel:				
Carbon	843,000	53,600	57,200	677,000
High-strength low-alloy	W	W	W	W
Stainless and heat-resisting	120,000	5,110	5,110	61,500
Full alloy	2,030,000	175,000 ^r	177,000	2,070,000
Tool	W	W	W	W
Total steel	2,990,000	234,000 ^r	239,000	2,800,000
Superalloys	9,230	508	508	11,900
Miscellaneous and unspecified ²	252,000	W	W	W
Total consumption	5,030,000	404,000 ^r	449,000	4,920,000

^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, unless otherwise specified)

	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:				
October	18,600	109,000	120	20,300
November:				
Germany	--	--	907	46,300
Netherlands	2,980	28,100	--	--
Total	2,980	28,100	907	46,300
January–November	1,340,000	3,740,000	34,500	1,630,000
Exports:				
2010	11,900,000	33,300,000	21,200	671,000
2011:				
October	597,000	2,240,000	22,000	735,000
November:				
Canada	686,000	1,730,000	--	--
Colombia	--	--	111	10,300
Israel	380	4,940	--	--
Mexico	775,000	2,420,000	--	--
New Zealand	2,220	5,700	--	--
Philippines	664	4,640	--	--
United Kingdom	31,600	787,000	--	--
Total	1,500,000	4,950,000	111	10,300
January–November	9,510,000	33,000,000	98,400	3,240,000

-- 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, unless otherwise specified)

	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:						
October	293,000	8,940,000	361,000	5,630,000	74,800	1,530,000
November:						
Austria	131,000	3,350,000	90	5,610	25,100	653,000
Canada	59,500	1,780,000	--	--	--	--
China	--	--	17,000	414,000	--	--
Czech Republic	16,100	429,000	--	--	--	--
Germany	393	24,600	--	--	--	--
India	1,730	92,600	--	--	--	--
Korea, Republic of	37,000	1,090,000	--	--	--	--
South Africa	--	--	61,100	1,450,000	80,100	1,540,000
Taiwan	--	--	20,100	598,000	--	--
Total	246,000	6,760,000	98,300	2,470,000	105,000	2,200,000
January–November	2,070,000	59,700,000	2,680,000	43,600,000	859,000	16,900,000
Exports:						
2010	882,000	18,100,000	140,000	2,140,000	1,100,000	10,600,000
2011:						
October	43,400	1,190,000	1,600	36,300	18,900	168,000
November:						
Brazil	--	--	--	--	3,840	55,500
Canada	28,700	676,000	--	--	241	5,420
Germany	--	--	--	--	3,370	30,000
India	--	--	421	4,000	--	--
Korea, Republic of	2,310	98,400	--	--	--	--
Peru	1,000	38,400	--	--	--	--
Saudi Arabia	--	--	2,880	51,000	--	--
Total	32,000	813,000	3,300	55,000	7,460	90,900
January–November	402,000	8,850,000	83,100	1,300,000	234,000	2,090,000

-- 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:						
October	175,000	123,000	--	--	329,000	119,000
November:						
Canada	128,000	45,300	--	--	20,000	8,780
China	--	--	--	--	2,460	4,400
Germany	--	--	--	--	32,500	9,210
Mexico	--	--	--	--	18,500	7,470
Total	128,000	45,300	--	--	73,500	29,900
January–November	1,360,000	1,540,000	75,000	367,000	177,000,000	4,930,000

-- 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, unless otherwise specified)

	Sulfates		Vanadates	
	Quantity	Value	Quantity	Value
2010	48,200	\$608,000	158,000	\$4,050,000
2011:				
October	--	--	33,300	1,260,000
November:				
Austria	--	--	4,960	108,000
China	4,790	63,500	6,630	212,000
Japan	94	5,600	--	--
South Africa	--	--	34,000	693,000
Total	4,880	69,100	45,600	1,010,000
January–November	42,200	738,000	251,000	6,320,000

-- Zero.

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

Source: U.S. Census Bureau.