

Mineral Industry Surveys

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VANADIUM IN OCTOBER 2007

Reported domestic consumption of vanadium in October 2007 was about 2% less than that of the previous month, and was about 7% more than that of October 2006, according to the U.S. Geological Survey. Consumer stocks of vanadium, in all forms, were 296 metric tons (t) at the beginning of 2007 and 297 t at the end of October.

According to Ryan's Notes (2007), U.S. ferrovanadium (FeV) prices ranged from \$18.789 to \$19.278 per pound of vanadium content in October, as compared with \$19.300 to \$19.600 in September. European FeV prices ranged from \$38.000 to \$38.500 per kilogram in October, as compared with \$37.563 to \$38.375 in September. Vanadium pentoxide (V₂O₅) prices ranged from \$7.556 to \$7.856 per pound in October, as compared with \$7.469 to \$7.675 in September.

Precious Metals Australia Ltd. (PMA) received environmental approvals to proceed with construction and operation of the Windimurra Mine in Western Australia. Process design changes, not included in the original permits from 1998, have been approved. PMA expected that annual FeV production of 6,400 t would commence at Windimurra in the second half of 2008 (Platts Metals Week, 2007).

References Cited

Platts Metals Week, 2007, PMA obtains Windimurra permits: Platts Metals Week, v. 78, no. 44, October 29, p. 5.
Ryan's Notes, 2007, [untitled]: Ryan's Notes, v. 13, no. 44, November 5, p. 12.

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

(Kilograms, contained vanadium)

	2006 ^P		2007					
	Consumption	Stocks	September		October		Year to date	
			Consumption	Stocks	Consumption	Stocks	Consumption	Stocks
Ferrovandium ²	3,350,000	247,000	260,000	247,000	257,000	253,000	2,800,000	253,000
Vanadium-aluminum alloy	W	W	W	W	W	W	W	W
Other ³	298,000	48,100	73,700	46,100	70,000	43,900	662,000	43,900
Total	3,650,000	296,000	334,000	294,000	327,000	297,000	3,460,000	297,000

^PPreliminary. 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.

³Includes 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)

	2006 ^P	2007		
		September	October	Year to date
Steel:				
Carbon	931,000	61,400	52,600	774,000
High-strength low-alloy	1,020,000	106,000	106,000	1,030,000
Stainless and heat-resisting	60,700	5,120	5,120	51,100
Full alloy	1,020,000	95,800	104,000	974,000
Tool	322,000	36,200	34,600	367,000
Total steel	3,350,000	305,000	302,000	3,200,000
Superalloys	4,130	723	495	6,220
Miscellaneous and unspecified ²	296,000	27,900	24,200	258,000
Total consumption	3,650,000	334,000	327,000	3,460,000

^PPreliminary.

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:				
2006	102,000	\$312,000	121,000	\$5,270,000
2007:				
August	--	--	--	--
September:				
Mexico	19,900	52,600	--	--
Total	19,900	52,600	--	--
Year to date	817,000	1,180,000	--	--
Exports:				
2006	17,000,000	54,500,000	491,000	13,200,000
2007:				
August	1,860,000	6,000,000	--	--
September:				
Belgium	16,300	52,000	--	--
Canada	770,000	2,370,000	--	--
Colombia	18,100	128,000	--	--
Mexico	500,000	1,700,000	--	--
Total	1,300,000	4,250,000	--	--
Year to date	16,300,000	56,500,000	--	--

-- 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:						
2006	2,140,000	\$90,500,000	1,920,000	\$45,200,000	129,000	\$3,370,000
2007:						
August	162,000	6,480,000	252,000	5,020,000	9,700	352,000
September:						
Austria	19,900	653,000	--	--	--	--
Brazil	500	18,600	--	--	--	--
Canada	11,900	315,000	--	--	--	--
China	--	--	34,000	966,000	--	--
Czech Republic	60,000	2,040,000	--	--	--	--
Germany	1,360	76,500	--	--	--	--
Israel	--	--	--	--	4,520	76,600
Korea, Republic of	158,000	4,600,000	--	--	--	--
Russia	--	--	75,500	1,110,000	--	--
South Africa	--	--	40,900	1,230,000	--	--
United Kingdom	--	--	--	--	5	12,800
Total	251,000	7,710,000	150,000	3,310,000	4,520	89,300
Year to date	2,170,000	61,900,000	1,780,000	35,300,000	22,600	691,000
Exports:						
2006	515,000	11,400,000	341,000	7,150,000	832,000	7,780,000
2007:						
August	18,400	450,000	1,090	23,900	149,000	1,970,000
September:						
Canada	10,000	457,000	--	--	--	--
China	--	--	2,000	37,000	--	--
France	--	--	--	--	7,290	111,000
Germany	--	--	--	--	11,700	55,400
India	--	--	10,700	112,000	--	--
Italy	--	--	8,060	265,000	--	--
Japan	3,080	40,700	--	--	--	--
Russia	--	--	--	--	48,900	435,000
Spain	--	--	--	--	4,770	29,300
Trinidad & Tobago	--	--	1,000	20,900	--	--
Total	13,100	498,000	21,800	435,000	72,600	631,000
Year to date	121,000	4,500,000	271,000	4,350,000	436,000	5,030,000

-- 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)

	Ash and residues		Ash and residues (not from the manufacture of iron and steel)	
	Quantity	Value	Quantity	Value
2006	637,000	\$7,320,000	1,140,000	\$1,130,000
2007:				
August	114,000	1,210,000	45,800	67,100
September:				
Canada	--	--	54,500	75,300
Mexico	95,400	1,110,000	--	--
Total	95,400	1,110,000	54,500	75,300
Year to date	775,000	7,610,000	525,000	742,000

-- 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
2006	16	\$26,700	115,000	\$3,330,000
2007:				
August	--	--	17,600	400,000
September:				
Germany	--	--	333	15,500
Japan	--	--	1	3,350
Total	--	--	334	18,900
Year to date	81,400	772,000	128,000	2,600,000

-- Zero.

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

Source: U.S. Census Bureau.