Mineral Industry Surveys

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TITANIUM IN THE THIRD QUARTER 2003

According to the U.S. Geological Survey (USGS), titanium mill product shipments in the third quarter of 2003 were 3,840 metric tons, a 2% decrease compared with shipments from the previous quarter. Receipts of titanium scrap totaled 4,740 tons, a 5% increase compared with receipts from the previous quarter. Data for titanium metal products are developed by the USGS from a voluntary survey of domestic operations. Data for nonrespondents were estimated based on previously reported data.

TABLE 1

COMPONENTS OF U.S. TITANIUM METAL SUPPLY AND DEMAND[1]

(Metric tons)

	2002			2003			
	Third quarter	Fourth quarter	Year to date	First quarter	Second quarter	Third quarter	Year to date
Production:							
Sponge	W	W	W	W	W	W	W
Ingot	6,770	4,310	22,700	7,370	9,930	9,470	26,800
Mill products	4,040	4,410	19,900	4,540	5,670	5,540	15,700
Exports:							
Sponge	927	807	2,810	1,240	1,370	832 [2]	3,430 [2]
Waste and scrap	1,210	1,180	6,000	1,340	896	902 [2]	3,140 [2]
Ingot	131	278	908	164	234	61 [2]	459 [2]
Billet	60	49	261	50	26	4 [2]	80 [2]
Bloom, sheet bar, slab	287	199	1,130	166	62	39 [2]	267 [2]
Other unwrought	85	32	352	32	37	48 [2]	117 [2]
Bars, rods, profiles, wire	575	563	2,680	576	614	461 [2]	1,650 [2]
Other wrought	1,110	813	3,460	1,090	976	556 [2]	2,620 [2]
Total	4,380	3,920	17,600	4,650	4,210	2,900 [2]	11,800 [2]
Imports:							
Sponge	2,070	2,310	10,700	1,640	4,030 [3]	1,100 [2, 3]	6,770 [2, 3]
Waste and scrap	1,420	1,390	6,270	1,140	1,710	851 [2]	3,700 [2]
Ingot	354	264	1,080	182	155	141 [2]	479 [2]
Billet	20	22	128	19	20	14 [2]	53 [2]
Powder	23	20	75	52	20	4 [2]	77 [2]
Bloom, sheet bars, slab	10	5	30	--	18	-- [2]	18 [2]
Other unwrought	93	60	362	194	130	161 [2]	485 [2]
Mill products	503	514	2,140	659	686	457 [2]	1,800 [2]
Other articles of titanium	90	119	550	79	136	82 [2]	297 [2]
Total	4,580	4,710	21,300	3,960 [r]	6,900	2,810 [2]	13,700 [2]
Stocks, end of period:							
Sponge, Government	15,300	13,200	XX	10,000	10,000	8,430	XX
Sponge, industry	9,870	11,700	XX	10,700	10,400	9,780	XX
Scrap	4,140	3,760	XX	4,330	4,210	4,600	XX
Ingot	4,350	3,390	XX	3,430	4,580	3,460	XX
Consumption:							
Sponge	4,420	2,920	17,300	3,110	4,470	5,090	12,700
Scrap	2,220	2,750	11,600	2,780	3,960	3,840	10,600
Ingot	5,840	2,980	18,400	5,970	6,640	8,900	21,500
Shipments:							
Mill products (net shipments):							
Forging and extrusion billet	1,420	1,380	6,020	1,410	1,250	1,290	3,950
Plate, sheet, strip	1,320	1,280	5,960	1,160	1,410	1,320	3,890
Rod, bar, fastener stock, wire	721	656	3,220	913	1,180	1,140	3,230
Other[4]	96	235	1,050	275	89	101	465
Total	3,550	3,560	16,200	3,760	3,930	3,840	11,500
Castings	83	94	389	88	109	160	357
Receipts:							
Scrap:							
Home	W	W	7,570	1,330	1,320	1,680	4,330
Purchased	W	W	10,900	3,190	3,190	3,060	9,440
Total	2,690	4,160	18,400	4,510	4,510	4,740	13,800

[r]Revised. W Withheld to avoid disclosing company proprietary data. XX Not applicable.

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

[2]Imports and exports for third quarter 2003 include July and August only. September 2003 data were not available at time of publication.

[3]Includes estimates by the U.S. Geological Survey.

[4]Data for pipe and tubing and other have been combined to avoid disclosing company proprietary data.

TABLE 2
COMPONENTS OF U.S. TITANIUM DIOXIDE PIGMENT SUPPLY AND DEMAND[1]

(Metric tons)

	2002			2003			
	Third quarter	Fourth quarter	Year to date	First quarter	Second quarter	Third quarter	Year to date
Production	359,000	357,000	1,410,000	346,000	365,000	346,000	1,060,000
Imports[2]	60,000	50,300	231,000	59,000	67,000	42,500 [3]	168,000
Exports[4]	145,000	147,000	540,000	143,000	149,000	94,100 [3]	386,000
Stocks, end of period	123,000	137,000	XX	139,000	156,000	137,000	XX
Apparent consumption[5]	288,000	247,000	1,120,000	259,000	266,000	NA	NA

NA Not available. XX Not applicable.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]Based on Harmonized Tariff Schedule of the United States (2823.00.0000, 3206.10.0050, and 3206.10.0010).
[3]Imports and exports for third quarter 2003 include July and August only. September data were not available at time of publication.
[4]Based on Harmonized Tariff Schedule of the United States (2823.00.0000, 3206.11.0000 and 3206.19.0000).
[5]Apparent consumption = production + imports - exports - stock increase or + stock decrease.

Source: U.S. Census Bureau.

TABLE 3
U.S. EXPORTS OF TITANIUM PRODUCTS[1]

(Metric tons)

	2002			2003			
	Third quarter	Fourth quarter	Year to date	First quarter	Second quarter	July-August	Year to date
Metal:							
Unwrought:							
Sponge	927	807	2,810	1,240	1,370	832	3,430
Waste and scrap	1,210	1,180	6,000	1,340	896	902	3,140
Ingot	131	278	908	164	234	61	459
Billet	60	49	261	50	26	4	80
Blooms, sheet bars, slab	287	199	1,130	166	62	39	267
Other unwrought	85	32	352	32	37	48	117
Wrought:							
Bars, rods, profiles, wire	575	563	2,680	576	614	461	1,650
Other	1,110	813	3,460	1,090	976	556	2,620
Ferrotitanium and ferrosilicon titanium	207	146	834	264	280	234	778
Ores and concentrates	1,460	851	3,810	6,590	970	483	8,050
Pigments and oxides:							
Titanium oxides	9,270	6,690	28,300	5,860	6,610	3,530	16,000
Pigments containing 80% or more titanium dioxide	131,000	131,000	485,000	126,000	130,000	84,000	340,000
Other pigments	4,470	9,610	26,800	11,200	12,500	6,500	30,200

[1]Data 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 FOR CONSUMPTION OF TITANIUM METAL[1]

(Metric tons)

	2002			2003			
	Third quarter	Fourth quarter	Year to date	First quarter	Second quarter	July-August	Year to date
Unwrought:							
Sponge:							
Japan	835	1,000	4,130	854	1,840	544	3,240
Kazakhstan	1,160	1,290	6,010	752 e	2,110 e	501 e	3,360 e
Russia	60	18	525	17	17	35	70
Other[2]	17	1	73	12	61	19	92
Total	2,070	2,310	10,700	1,640	4,030	1,100	6,770
Waste and scrap:							
Belgium	56	27	149	57	21	47	125
Canada	55	38	198	79	29	53	161
France	158	201	818	216	239	161	616
Germany	104	122	509	80	237	130	447
Israel	48	--	120	--	62	--	62
Italy	26	50	174	15	27	12	54
Japan	636	470	2,440	326	411	214	951
Mexico	3	7	474	9	20	1	30
Taiwan	60	119	197	72	116	36	224
United Kingdom	240	240	941	194	391	158	744
Other	30 r	117 r	250 r	94 r	152	39	285
Total	1,420	1,390	6,270	1,140	1,710	851	3,700
Ingot:							
Belgium	--	--	40	--	--	5	5
Germany	81	20	209	25	41	10	76
Russia	264	239	811	153	107	105	365
United Kingdom	6	--	15	--	6	21	28
Other	3 r	9	8 r	5	--	--	5
Total	354	264	1,080	182	155	141	479
Billet:							
Japan	(3)	--	31	4	(3)	1	4
Russia	12	1	43	8	--	--	8
United Kingdom	8	20	54	7	19	13	39
Other	--	--	--	--	1	--	1
Total	20	22	128	19	20	14	53
Blooms, sheet bars, slabs	10	5	30	--	18	--	18
Powder	23	20	75	52	20	4	77
Other	93	60	362	194	130	161	485
Articles of titanium:							
Castings	3	3	15	4	33	9	46
Other	87	116	535	75	103	73	251
Mill products:							
Bars, rods, profiles, wire	282	243	1,090	349	377	297	1,020
Plates, sheets, strips, foil	164	183	675	228	205	114	547
Tubes and pipes	33	62	203	30	40	24	93
Other	24	26	165	52	64	22	138
Total	503	514	2,140	659	686	457	1,800
Ferrotitanium	959	1,210	3,700	797	717	513	2,030

[e]Estimated. [r]Revised. -- Zero.
[1]Data are rounded to no more than three significant digits; may not add to totals shown.
[2]All or part of these data have been referred to the U.S. Census Bureau for verification.
[3]Less than 1/2 unit.

Source: U.S. Census Bureau.

TABLE 5

U.S. IMPORTS FOR CONSUMPTION OF TITANIUM CONCENTRATES[1]

(Metric tons)

	2002			2003			
	Third quarter	Fourth quarter	Year to date	First quarter	Second quarter	July-August	Year to date
Ilmenite:							
Australia	4,510	68,200	265,000	83,900	92,400	35,000	211,000
Brazil	--	--	--	687	--	--	687
India	--	--	11,000	--	--	--	--
Malaysia	25,200	--	50,500	10,200	--	--	10,200
South Africa	--	--	--	--	--	12,700	12,700
Ukraine	19,500	8,210	52,800	24,000	20,000	--	44,000
Vietnam	15,800	--	15,800	11,300	--	--	11,300
Total	65,000	76,400	395,000	130,000	112,000	47,700	290,000
Titanium slag:							
Canada	25,200	28,300	94,900	--	--	--	--
South Africa	130,000	100,000	350,000	127,000	63,700	61,000	252,000
Other[2]	--	68	68	3	20	--	23
Total	155,000	128,000	445,000	127,000	63,700	61,000	252,000
Rutile:							
Australia	600	19,800	61,000	35,700	28,600	15,100	79,400
South Africa	34,400	43,800	138,000	31,700	31,200	18,000	80,800
Ukraine	1,500	6,820	11,600	5,070	5,000	--	10,100
Other[2]	5 r	313 r	339 r	1 r	59	60	118
Total	36,500	70,800	211,000	72,400	64,900	33,200	170,000
Synthetic rutile:							
Australia	45,000	39,400	176,000	26,900	58,000	20,000	105,000
Malaysia	--	--	2,760	4,610	--	4,000	8,610
Netherlands[2]	41	--	41	--	--	--	--
Other	--	1	2	--	12,600	--	12,600
Total	45,000	39,400	179,000	31,500	70,600	24,000	126,000
Titaniferous iron ore, Canada[2]	13,000	10,400	36,600	--	--	--	--

[r]Revised. -- Zero.

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

[2]All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau.

TABLE 6

U.S. IMPORTS FOR CONSUMPTION OF TITANIUM PIGMENTS[1]

(Metric tons)

	2002			2003			
	Third quarter	Fourth quarter	Year to date	First quarter	Second quarter	July-August	Year to date
80% or more titanium dioxide:							
Belgium	832	455	2,680	869	2,580	1,770	5,220
Canada	16,600	14,800	62,700	18,900	16,600	11,100	46,500
China	1,840	1,870	6,530	2,070	2,540	1,390	6,010
Finland	1,190	746	3,800	584	1,500	598	2,680
France	1,190	1,210	5,460	1,070	1,500	855	3,430
Germany	4,610	3,370	22,300	7,530	6,180	4,910	18,600
Italy	2,830	2,380	11,700	1,400	3,220	2,600	7,220
Japan	2,150	2,450	8,890	1,630	3,050	1,690	6,360
Korea, Republic of	953	1,080	5,900	1,840	2,100	2,080	6,020
Mexico	2,840	2,040	8,750	1,740	2,980	1,380	6,090
Norway	2,160	1,140	4,710	1,870	1,310	877	4,050
Singapore	546	480	2,240	508	163	127	798
Slovenia	633	594	2,760	598	468	215	1,280
South Africa	3,270	2,150	9,700	2,180	3,570	1,020	6,770
Spain	1,290	1,560	7,570	2,170	1,010	1,930	5,110
Ukraine	--	--	3,200	--	--	--	--
United Kingdom	4,070	2,820	12,100	2,070	5,670	3,760	11,500
Other	947	759	2,660	527	745	421	1,690
Total	47,900	39,900	184,000	47,500	55,200	36,700	139,000
Other titanium dioxide:							
Canada	394	509	1,770	629	693	319	1,640
Other	583	590	2,730	729	699	461	1,890
Total	977	1,100	4,500	1,360	1,390	780	3,530
Titanium oxide:							
Brazil	1,900	--	4,130	100	--	--	100
China	1,510	2,070	7,380	2,650	3,550	1,330	7,530
Czech Republic	1,000	840	3,470	797	638	447	1,880
France	3,460	3,620	17,000	3,880	3,890	2,020	9,790
Germany	1,100	1,190	3,830	1,130	1,050	845	3,030
Japan	246	448	1,090	511	428	36	975
Korea, Republic of	1,070	636	2,960	95	115	19	229
Poland	516	400	2,010	700	601	280	1,580
Other	260 r	171	1,160 r	262	170	35	467
Total	11,100	9,370	43,100	10,100	10,400	5,020	25,600
Grand total	60,000	50,300	231,000	59,000	67,000	42,500	168,000

[r]Revised. -- Zero.

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

Source: U.S. Census Bureau.

TABLE 7
PRICES FOR TITANIUM MATERIALS

	2002		2003		
	Third quarter	Fourth quarter	First quarter	Second quarter	Third quarter
Ilmenite, per metric ton, f.ob. Australian ports[1]	$85- $100	$85- $100	$85- $100	$85- $100	$85- $100
Titanium slag, per metric ton:[2]					
Canada 80% TiO_2	344	340	XX	XX	XX
Canada 95% TiO_2	545	527	XX	XX	444
South Africa 85% TiO_2	457	445	386 r	409 r	397
Rutile, per metric ton, natural:[1]					
Bagged, f.o.b. Australian ports	430- 540	400- 540	400- 540	430- 540	430- 540
Bulk, f.o.b. Australian ports	420- 470	430- 470	415- 445	415- 445	415- 445
Sponge metal, per pound, import[2]	3.33	3.64	3.10	3.22 r	3.40
Titanium scrap, per pound, turnings, unprocessed (Ti-6Al-4V)[3]	1.08- 1.12	1.07- 1.10	2.29- 2.32	1.00- 1.05	1.20- 1.35
Ferrotitanium, per pound, 70% (max. 4.5% Al) per pound Ti[3]	2.18- 2.05	2.16- 2.18	1.25- 1.30	2.22- 2.25	2.40- 2.45
Titanium dioxide pigment, per pound:[4]					
Anatase, f.o.b. U.S. plants, list price	.92- .94	.85- .95	.88- .95	.85- .95	.85- .95
Rutile, f.o.b. U.S. plants, list price	.95- 1.05	.85- .95	.88- .95	.85- .90	.85- .90

[r]Revised. XX Not applicable.
[1]Source: Industrial Minerals (London).
[2]Unit value based on land-duty-paid U.S. imports for consumption.
[3]Source: Platts Metals Week.
[4]Source: Chemical Market Reporter.