



Mineral Industry Surveys

For information, contact:

Joseph Gambogi, Titanium Commodity Specialist
U.S. Geological Survey
983 National Center
Reston, VA 20192
Telephone: (703) 648-7718, Fax: (703) 648-7975
E-mail: jgambogi@usgs.gov

Mahbood Mahdavi (Data)
Telephone: (703) 648-7778
Fax: (703) 648-7792
E-mail: mmahdavi@usgs.gov

Internet: <http://minerals.usgs.gov/minerals>

TITANIUM IN THE SECOND QUARTER 2007

According to the U.S. Geological Survey (USGS), titanium mill product shipments in the second quarter of 2007 were 8,190 metric tons (t), a slight increase compared with shipments in the previous quarter. Receipts of titanium scrap totaled 7,630 t, an 8% decrease compared with receipts from the previous quarter. Approximately 80% of mill products and castings was used in commercial and military aerospace applications. Other

applications for titanium mill products and castings included, in descending order, industrial, nonaerospace military, medical, and consumer uses. 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 DEMAND¹

(Metric tons)

	2006				2007		
	Second quarter	Third quarter	Fourth quarter	Year to date	First quarter	Second quarter	Year to date
Production:							
Sponge	W	W	W	W	W	W	W
Ingot	13,300	13,900	13,000	53,100	14,900	14,400	29,300
Mill products	8,850	8,900	9,300	36,100	9,300	9,510	18,800
Exports:							
Waste and scrap	3,500	2,610	2,350	10,800	4,650	1,660	6,310
Sponge	377	343	376	1,380	455	673	1,130
Ingot	527	463	565	2,070	713	616	1,330
Other unwrought	216	222	309	956	176	358	534
Bar, rod, profiles, wire	867	946	1,020	3,670	810	678	1,490
Billet	325	247	321	1,200	713	746	1,460
Bloom, sheet bar, slab	178	90	136	532	87	292	379
Other wrought	2,080	2,020	2,020	7,900	1,950	2,300	4,250
Total	8,070	6,930	7,100	28,500	9,560	7,320	16,900
Imports:							
Waste and scrap	3,320	3,480	3,030	12,800	3,610	2,960	6,570
Sponge ²	6,920	6,290	5,770	24,400	5,270	6,830	12,100
Ingot	1,130	708	474	3,140	440	688	1,130
Powder	78	36	27	152	64	91	155
Other unwrought	470	447	218	1,520	37	48	85
Wrought	1,270	1,250	1,250	4,860	1,100	1,060	2,160
Castings	4	15	8	31	2	10	12
Other	125 ^r	102 ^r	136 ^r	470 ^r	94 ^r	107	201
Total	13,300	12,300	10,900	47,400	10,600	11,800	22,400
Stocks, end of period:							
Sponge, industry	6,520	7,960	8,240	XX	7,850	7,630	XX
Scrap	8,000	8,890	8,940	XX	10,400	10,200	XX
Ingot	3,810	4,750	4,330	XX	5,220	4,700	XX
Consumption:							
Sponge	6,370	6,420	7,220	28,400	8,270	9,410	17,700
Scrap	6,460	5,430	5,180	25,000	5,800	6,130	11,900
Ingot	11,100	12,400	10,400	45,100	11,100	13,800	25,000
Shipments:							
Ingot (net shipments)	2,890	2,150	2,710	10,500	2,870	1,090	3,970
Mill products (net shipments):							
Forging and extrusion billet	3,100	3,140	3,220	11,800	2,970	3,320	6,290
Plate, sheet, strip	3,030	2,850	3,270	12,200	3,650	3,330	6,980
Bar, rod, fastener stock, wire	1,300	1,500	W	4,180	1,290	1,370	2,670
Other ³	182	160	1,580	2,090	168	163	331
Total	7,610	7,650	8,070	30,200	8,080	8,190	16,300
Castings	218	W	W	431	238	469	707
Receipts, scrap:							
Home	2,910	2,020	1,880	13,500	3,350	2,690	6,040
Purchased	6,170	5,500	4,250	19,400	4,970	4,940	9,920
Total	9,080	7,510	6,130	32,900	8,330	7,630	16,000

^rRevised. W Withheld to avoid disclosing company proprietary data. XX Not applicable.

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

²Estimated by the U.S. Geological Survey.

³Data for pipe and tube and other have been combined to avoid disclosing company proprietary data.

TABLE 2
U.S. EXPORTS OF TITANIUM PRODUCTS¹

(Metric tons)

	2006				2007		
	Second quarter	Third quarter	Fourth quarter	Year to date	First quarter	Second quarter	Year to date
Metal:							
Waste and scrap	3,500	2,610	2,350	10,800	4,650	1,660	6,310
Unwrought:							
Sponge	377	343	376	1,380	455	673	1,130
Ingot	527	463	565	2,070	713	616	1,330
Other unwrought	216	222	309	956	176	358	534
Wrought:							
Bar, rod, profiles, wire	867	946	1,020	3,670	810	678	1,490
Billet	325	247	321	1,200	713	746	1,460
Bloom, sheet bar, slab	178	90	136	532	87	292	379
Other	2,080	2,020	2,020	7,900	1,950	2,300	4,250
Ferrotitanium and ferrosilicon titanium	486	479	819	2,320	517	675	1,190
Ores and concentrates	13,400	8,640	7,420	32,800	1,520	4,630	6,150
Pigment:							
80% or more titanium dioxide	130,000	151,000	134,000	513,000	120,000	139,000	259,000
Other titanium dioxide	13,700	15,200	18,600	57,100	22,400	30,700	53,100
Unfinished titanium dioxide ²	3,540	2,500	1,580	10,800	2,490	2,420	4,910

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

²Unmixed and not surface treated.

Source: U.S. Census Bureau.

TABLE 3
U.S. IMPORTS FOR CONSUMPTION OF TITANIUM METAL¹

(Metric tons)

	2006				2007		
	Second quarter	Third quarter	Fourth quarter	Year to date	First quarter	Second quarter	Year to date
Waste and scrap:							
Belgium	56	33	11	250	18	12	30
Canada	151	137	147	664	168	253	421
China	163	176	150	596	172	50	222
France	358	320	355	1,350	412	392	804
Germany	443	697	421	2,070	452	369	821
Israel	70	52	112	325	50	40	90
Japan	637	626	541	2,320	584	567	1,150
Taiwan	76	265	147	657	429	130	559
United Kingdom	642	443	567	2,160	779	700	1,480
Other	724	730	578	2,420	547	447	994
Total	3,320	3,480	3,030	12,800	3,610	2,960	6,570
Unwrought:							
Sponge:							
Japan	2,060	2,100	2,040	8,070	1,880	1,970	3,850
Kazakhstan ^c	3,560	3,000	3,050	12,500	2,550	3,690	6,240
Russia	733	605	87	1,570	277	262	539
Ukraine	405	492	317	1,650	326	5	331
Other ²	158	96	282	690	235	907	1,140
Total	6,920	6,290	5,770	24,400	5,270	6,830	12,100
Ingot:							
Belgium	34	--	--	34	--	--	--
France	--	--	28	39	--	--	--
Germany	180	74	193	555	169	185	354
Russia	892	607	235	2,430	271	441	712
Other	20	27	18	86	--	62	62
Total	1,130	708	474	3,140	440	688	1,130
Powder	78	36	27	152	64	91	155
Other	470	447	218	1,520	37	48	85
Wrought:							
Bar, rod, profiles, wire	275	347	329	1,270	354	298	652
Billet	105	110	135	494	77	185	262
Bloom, sheet bar, slab	530	431	345	1,580	29	4	33
Plate, sheet, strip, foil	261	284	390	1,190	531	486	1,020
Tube and pipe	33	25	33	128	34	23	57
Other	63	54	21	194	79	59	138
Total	1,270	1,250	1,250	4,860	1,100	1,060	2,160
Other articles of titanium:							
Castings	4	15	8	31	2	10	12
Other	125	102	136	470	94	107	201
Ferrotitanium and ferrosilicon titanium	2,140	1,750	1,500	7,080	1,670	3,060	4,730

^cEstimated. -- Zero.

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

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

Source: U.S. Census Bureau.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF TITANIUM CONCENTRATES¹

(Metric tons)

	2006				2007		
	Second quarter	Third quarter	Fourth quarter	Year to date	First quarter	Second quarter	Year to date
Ilmenite:							
Australia	--	50,100	68,200	127,000	72,700	39,000	112,000
Ukraine	20,000	20,100	20,000	60,100	--	--	--
Total	20,000	70,200	88,300	187,000	72,700	39,000	112,000
Titanium slag:							
Canada	28,800	56,100	69,500	159,000	31,200	34,300	65,500
South Africa	156,000	120,000	155,000	512,000	57,500	162,000	219,000
Other ²	1,390	--	1	22,000	11,000	54,700	65,700
Total	186,000	176,000	224,000	693,000	99,700	251,000	350,000
Rutile:							
Australia	658	16,700	32,400	60,100	66,400	5,420	71,800
Canada	25,200	7	5,710	41,300	18,000	16,300	34,300
Sierra Leone	--	7,500	--	7,500	8,000 ^r	--	8,000
South Africa	36,300	31,500	44,600	136,000	59,000	41,200	100,000
Ukraine	200	5,070	64	5,530	344	385	729
Other ²	112	77	65	479	40 ^r	36	76
Total	62,500	60,800	82,900	251,000	152,000	63,300	215,000
Synthetic rutile:							
Australia	31,500	17,200	6,010	73,000	650	45,000	45,700
Malaysia	4,560	--	4,500	9,060	5,090	18	5,110
South Africa	10,000	12,100	--	22,100	7,960	--	7,960
Other ²	--	1	--	175	2	17	19
Total	46,100	29,300	10,500	104,000	13,700	45,000	58,700
Titaniferous iron ore, Canada²	11,700	38,100	--	49,800	--	--	--

^rRevised. -- Zero.

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

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

Source: U.S. Census Bureau.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF TITANIUM PIGMENT¹

(Metric tons)

	2006				2007		
	Second quarter	Third quarter	Fourth quarter	Year to date	First quarter	Second quarter	Year to date
80% or more titanium dioxide:							
Australia	1,770	1,710	892	7,730	1,340	704	2,040
Belgium	2,830	1,810	2,080	9,060	1,160	1,160	2,310
Canada	19,500	18,100	15,000	76,200	17,900	21,900	39,900
China	6,070	4,950	6,610	26,900	3,980	4,590	8,570
Finland	4,050	3,710	4,270	15,100	3,280	2,680	5,960
France	668	675	922	2,770	824	914	1,740
Germany	7,980	2,340	2,500	17,700	2,310	1,210	3,520
Italy	3,010	534	1,740	6,880	1,240	1,550	2,780
Japan	1,020	1,050	896	4,240	832	980	1,810
Korea, Republic of	75	154	698	1,040	257	1,010	1,270
Mexico	249	880	1,090	3,650	1,300	868	2,170
Netherlands	2,090	893	1,400	5,110	863	1,010	1,870
Norway	1,660	1,010	444	3,570	676	428	1,100
Singapore	272	526	435	1,830	600	653	1,250
Slovenia	748	778	398	1,920	314	477	791
Spain	987	3,900	3,580	12,200	3,290	2,920	6,210
United Kingdom	738	765	1,140	6,420	792	1,850	2,650
Other	1,050	1,400	910	4,100	895	1,290	2,180
Total	54,800	45,200	45,000	206,000	41,900	46,200	88,100
Other titanium dioxide:							
Canada	354	541	511	1,870	579	479	1,060
China	396	309	329	1,270	227	163	390
Other	549	686	646	2,280	518	883	1,400
Total	1,300	1,540	1,490	5,420	1,320	1,530	2,850
Unfinished titanium dioxide:²							
Canada	9,000	--	--	16,200	--	42	42
China	4,300	4,950	4,620	17,800	4,620	4,580	9,200
Czech Republic	541	1,000	675	3,610	794	836	1,630
France	4,340	3,000	2,940	13,300	1,580	1,170	2,740
Germany	1,700	1,000	1,350	6,110	1,700	1,270	2,970
Other	5,840	5,360	4,140	19,200	6,120	3,700	9,820
Total	25,700	15,300	13,700	76,200	14,800	11,600	26,400
Grand total	80,500	62,100	60,200	288,000	58,000	59,400	117,000

-- Zero.

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

²Unmixed and not surface treated.

Source: U.S. Census Bureau.

TABLE 6
PRICES FOR TITANIUM MATERIALS

	2006			2007	
	Second quarter	Third quarter	Fourth quarter	First quarter	Second quarter
Ilmenite, per metric ton, f.o.b. Australian ports ¹	\$75- \$85	\$75- \$85	\$75- \$85	\$75- \$85	\$75- \$85
Titanium slag, per metric ton ²	414- 550	406- 595	402- 454	381- 508	353- 572
Rutile, per metric ton, natural: ¹					
Bagged, f.o.b. Australian ports	570- 700	570- 700	570- 700	570- 700	590- 700
Bulk, f.o.b. Australian ports	450- 480	450- 480	450- 500	450- 500	450- 500
Sponge metal, per pound, import ²	3.54-12.85	5.00-12.81	5.87-12.84	7.66- 9.65	7.62- 9.12
Titanium mill products, producer price index ³	338	343	300	310 ^r	311
Titanium scrap, per pound, turnings, unprocessed (Ti-6Al-4V) ⁴	5.35- 5.50	4.65- 4.75	4.00- 4.40	3.60- 3.80	2.33- 2.45
Ferrotitanium, per pound, 70% (max. 4.5% Al) per pound Ti ⁴	7.70- 8.00	7.25- 7.32	6.79- 7.00	6.25- 6.35	5.16- 5.23
Titanium dioxide pigment, producer price index ³	169	169	165	160	162

^rRevised.

¹Source: Industrial Minerals (London).

²Unit value based on land-duty-paid U.S. imports for consumption.

³1982=100. Source: U.S. Department of Labor, Bureau of Labor Statistics.

⁴Source: Platts Metals Week.