

Mineral Industry Surveys

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TUNGSTEN IN JUNE 2004

During the quarter ending June 30, 2004, U.S. net production of intermediate tungsten products, including metal powder and tungsten carbide powder produced from metal powder, was nearly equal in amount to net production during the quarter ending March 31, 2004, according to the U.S. Geological Survey. U.S. net production of intermediate tungsten products during the first half of 2004 was 43% lower than that of revised net production during the first half of 2003.

Total U.S. reported consumption of ferrotungsten, tungsten metal powder, tungsten carbide powder, tungsten scrap, and other tungsten materials during the quarter ending June 30, 2004, was nearly equal in amount to reported consumption during the quarter ending March 31, 2004. U.S. reported consumption of these materials during the first half of 2004 was 4% lower than that during the first half of 2003. These

materials were used to make alloys, cemented carbides, mill products, catalysts, and pigments.

Data for U.S. imports and exports for June 2004 will be published in a subsequent issue.

Update

Prices for tungsten ore concentrates, in dollars per metric ton unit from Metal Bulletin, are listed below. Prices in dollars per short ton unit were converted from metric ton unit prices and rounded to the nearest dollar. These prices represent combined prices for wolframite and scheelite ore concentrates with a minimum tungsten trioxide (WO₃) content of 65%. The prices for July 1-31, 2004, are as follows:

Low—\$57/metric ton unit WO₃ (\$52/short ton unit WO₃)
High—\$60/metric ton unit WO₃ (\$54/short ton unit WO₃)

TABLE 1
U.S. SALIENT TUNGSTEN STATISTICS¹

(Metric tons, tungsten content)

Period	Concentrate				Reported scrap consumption	Intermediate products			
	Reported consumption	Imports for consumption	Stocks, end of period			Net production ⁴	Reported consumption ⁵	Stocks, end of period	
			Industry ²	U.S. Government ³				Industry ⁶	U.S. Government ³
2003:									
June	W	365	W	29,600	292	575	745	722	784
July	W	463	W	29,600	302	523	775	655	759
August	W	427	W	29,600	331	516	739	637	759
September	W	530	W	29,500	252	567	753	661	767
October	W	223	W	29,500	314	536	755	780	767
November	W	244	W	29,400	311	476	679	813	767
December	W	402	W	29,400	265	509	697	806	765
January-December	W	4,690	XX	XX	4,010	9,030	9,400	XX	XX
2004:									
January	W	328	W	28,900	318	535	788	834	757
February	W	92	W	28,800	220	560	797	769	743
March	W	157	W	28,800	335 ^r	578 ^r	803	734 ^r	736
April	W	207	W	28,500	307 ^r	573 ^r	806	755 ^r	730
May	W	68	W	28,400	359 ^r	534 ^r	803 ^r	832 ^r	729
June	W	NA	W	28,400	312	571	808	826	729
Total	W	NA	XX	XX	1,850	3,350	4,800	XX	XX

^rRevised. NA Not available. 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.

²Reported by consumers.

³Data from Defense National Stockpile Center. Includes material committed for sale pending shipment.

⁴Net production of tungsten metal powder and tungsten carbide powder.

⁵Includes estimates and scrap.

⁶Data for tungsten metal powder and tungsten carbide powder reported by producers.

TABLE 2
U.S. PRODUCTION, CONSUMPTION, AND STOCKS OF
AMMONIUM PARATUNGSTATE, BY MONTH¹

(Metric tons, tungsten content)

Period	Production	Consumption	Stocks, end of period ²
2003:			
June	W	710	59
July	W	W	45
August	W	W	44
September	W	839	42
October	W	1,010	W
November	W	933	W
December	W	W	W
January-December ³	W	6,590	XX
2004:			
January	W	790	W
February	W	650	W
March	W	W	W
April	W	753 ^r	158
May	W	718 ^r	152
June	W	774	W
Total ³	W	3,690	XX

^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.

²Producers and consumers.

³Does not include withheld data.

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TABLE 3
U.S. PRODUCTION AND STOCKS OF TUNGSTEN PRODUCTS¹

(Metric tons, tungsten content)

Product ³	Net production ²				Stocks at end of period		
	2004				2003	2004	
	2003	May ^r	June	Year to date		May ^r	June
Metal powder	5,350	144	195	1,230	544	499	521
Tungsten carbide powder (made from metal powder)	3,680	390	377	2,130	263	333	305
Total	9,030	534	571	3,350	807	832	826

^rRevised.

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

²Gross production less quantity used to make other products in table.

³Data for cast and crystalline tungsten carbide powder and tungsten chemicals are withheld to avoid disclosing company proprietary data; not included in "Total."

TABLE 4
U.S. REPORTED CONSUMPTION OF TUNGSTEN, BY END USE^{1, 2, 3}

(Metric tons, tungsten content)

End use	2004		
	May	June	Year to date
Steels	22	22	132
Superalloys	W	W	W
Other alloys (excludes steels and superalloys) ⁴	W	W	W
Cemented carbides ⁵	437	440	2,640
Mill products made from metal powder	W	W	W
Chemical uses	W	W	W
Miscellaneous and unspecified	344 ^r	346	2,030
Total	803 ^r	808	4,800

^rRevised. W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

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

²Does not include materials used in making primary tungsten products.

³Includes estimates.

⁴Includes welding and hard-facing rods and materials, wear- and corrosion-resistant alloys, and nonferrous alloys.

and nonferrous alloys.

⁵Includes diamond tool matrices, cemented and sintered carbides, and cast carbide dies or parts.

TABLE 5
U.S. REPORTED CONSUMPTION AND CONSUMER STOCKS OF TUNGSTEN MATERIALS¹

(Metric tons, tungsten content)

Period	Ferro- tungsten	Tungsten metal powder	Tungsten carbide powder	Tungsten scrap	Other tungsten materials ²	Total
Consumption:						
2003:						
June	22	W	434	W	6	745
July	21	W	441	W	6	775
August	23	W	438	W	6	739
September	25	W	447	W	6	753
October	23	W	444	W	6	755
November	22	W	436	W	6	679
December	22	W	445	W	6	697
January-December	275	W	5,300	W	72	9,400
2004:						
January	21	W	452	W	6	788
February	21	W	450	W	6	797
March	22	W	444	W	6	803
April	21	W	447	W	6	806
May	22	W	441	W	6	803 ^r
June	22	W	445	W	6	808
Total	129	W	2,680	W	36	4,800
Stocks:						
2003:						
June	27	34	325	28	9	422
July	25	31	328	34	9	427
August	32	33	334	31	9	438
September	28	30	276	25	9	368
October	25	30	331	21	9	417
November	33	30	347	28	9	447
December	31	33	301	24	9	398
2004:						
January	30	33	312	25	9	409
February	29	31	307	23	9	399
March	27	31	308	26	9	401
April	26	30	304	29	9	398
May	24	33 ^r	317	24	9	407 ^r
June	33	33	308	18	9	400

^rRevised. W Withheld to avoid disclosing company proprietary data; included in "Total."

¹Includes estimates.

²Includes tungsten chemicals.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF TUNGSTEN, BY COUNTRY¹

(Metric tons, tungsten content)

Period and country of origin	Ores and concentrates	Ammonium tungstates	Ferro-tungsten	Metal powder	Tungsten carbide powder	Other ²	Total	Total, year to date
2003	4,690	2,640	377	1,090	1,370	1,020	11,200	XX
2004:								
March	157	17	15	124	213	136	662	2,270
April	207	101	--	111	108	97	624	2,890
May:								
Austria	--	--	--	--	--	1	1	11
Belgium	--	--	--	--	--	--	--	(3)
Bolivia	39	--	--	--	--	--	39	164
Canada	13	--	--	1	45	--	60	691
China	--	193	15	21	57	74	360	1,670
Congo (Kinshasa)	--	--	--	--	--	--	--	13
Czech Republic	--	--	--	--	--	(3)	(3)	7
France	--	--	--	--	(3)	--	(3)	5
Germany	--	17	--	75	1	2	95	321
Hong Kong	--	--	--	--	19	1	19	31
Hungary	--	--	--	--	--	(3)	(3)	2
India	--	--	--	--	--	(3)	(3)	2
Israel	--	--	--	16	12	(3)	29	173
Italy	--	--	--	--	(3)	(3)	(3)	32
Japan	--	--	--	(3)	--	3	4	30
Kenya	--	--	--	--	--	--	--	38
Korea, Republic of	--	--	--	6	3	--	9	61
Mexico	--	--	--	--	--	--	--	11
Netherlands	--	--	--	--	--	40	40	40
Portugal	--	--	--	--	--	--	--	68
Russia	--	--	--	--	--	16	16	50
Rwanda	--	--	--	--	--	--	--	92
Singapore	--	--	--	--	--	1	1	2
Sweden	--	--	--	--	--	(3)	(3)	(3)
Taiwan	--	--	--	--	--	(3)	(3)	4
Thailand	16	--	--	--	--	--	16	59
United Kingdom	--	--	--	--	--	(3)	(3)	(3)
Other	--	--	--	1	--	(3)	(3)	(3)
Total	68	210	15	120	137	139	689	3,580
Total, year to date	851	752	76	589	779	531	3,580	XX

-- Zero.

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

²Includes other unwrought tungsten, wrought tungsten, calcium and other tungstates, tungsten oxides, tungsten chlorides, other tungsten compounds, ash and residues containing mainly tungsten, and other mixtures of inorganic compounds containing tungsten. Tungsten content estimated in part.

³Less than 1/2 unit.

Note: Imports of waste and scrap in May 2004 totaled 79 metric tons, tungsten content, to give a year-to-date total of 519 metric tons, tungsten content.

Source: U.S. Census Bureau.

TABLE 7
U.S. EXPORTS OF TUNGSTEN, BY COUNTRY¹

(Metric tons, tungsten content)

Period and country of destination	Ores and concentrates ²	Ammonium tungstates	Metal powder ²	Tungsten carbide powder	Other ³	Total	Total, year to date
2003	20	99	1,130	1,700	1,440	4,390	XX
2004:							
March	2	18	34	108	153	315	901
April	(4)	18	28	107	76	229	1,130
May:							
Australia	--	--	14	1	(4)	14	20
Austria	--	--	--	(4)	(4)	(4)	1
Belgium	--	--	--	5	(4)	5	12
Brazil	--	--	(4)	1	(4)	2	8
Canada	--	--	3	6	5	14	87
Chile	--	--	--	--	(4)	(4)	1
China	5	--	(4)	--	1	6	15
Columbia	--	--	--	--	(4)	(4)	3
Czech Republic	--	--	--	--	1	1	8
France	--	--	1	7	2	10	119
Georgia	--	--	--	--	(4)	(4)	1
Germany	5	18	6	25	4	58	269
Hong Kong	--	--	(4)	--	--	(4)	4
Hungary	--	--	--	--	1	1	74
India	--	--	(4)	1	1	2	9
Ireland	--	--	--	--	(4)	(4)	4
Israel	--	--	--	--	(4)	(4)	10
Italy	--	--	3	(4)	(4)	3	44
Japan	--	--	2	1	8	10	46
Korea, Republic of	--	--	1	5	1	7	24
Luxembourg	--	--	(4)	9	--	9	24
Malaysia	--	--	--	--	--	--	12
Mexico	--	--	1	--	27	28	181
Netherlands	--	--	--	(4)	(4)	1	20
Norway	--	--	--	--	--	--	(4)
Peru	--	--	(4)	1	--	1	2
Philippines	--	--	--	--	--	--	1
Poland	--	--	--	--	(4)	(4)	(4)
Romania	--	--	--	--	1	1	1
Saudi Arabia	--	--	--	--	(4)	(4)	(4)
Singapore	--	--	1	(4)	(4)	1	6
South Africa	--	--	(4)	3	--	3	3
Spain	--	--	(4)	(4)	2	2	15
Sweden	9	--	(4)	--	(4)	10	11
Switzerland	--	--	(4)	--	(4)	(4)	14
Taiwan	--	--	5	5	63	73	151
Thailand	--	--	1	(4)	(4)	1	2
Turkey	--	--	(4)	--	--	(4)	1
United Arab Emirates	--	--	(4)	--	(4)	(4)	1
United Kingdom	--	--	4	76	20	100	290
Other	--	--	(4)	(4)	(4)	(4)	1
Total	19	18	44	148	139	368	1,500
Total, year to date	22	90	202	567	616	1,500	XX

-- Zero.

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

²Tungsten content estimated from reported gross weight.

³Includes unwrought tungsten, including bars and rods obtained simply by sintering, wrought tungsten, ferrotungsten, and other tungstates. Tungsten content estimated in part.

⁴Less than 1/2 unit.

Note: Estimated exports of waste and scrap in May 2004 totaled 25 metric tons, tungsten content, to give a year-to-date total of 275 metric tons, tungsten content.

Source: U.S. Census Bureau.