

Mineral Industry Surveys

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TUNGSTEN IN AUGUST 2004

U.S. net production of intermediate tungsten products, including metal powder and tungsten carbide powder produced from metal powder, in January through August 2004 was 35% lower than net production during the same period in 2003, according to the U.S. Geological Survey.

Total U.S. reported consumption of ferrotungsten, tungsten metal powder, tungsten carbide powder, tungsten scrap, and other tungsten materials during January through August 2004 was slightly higher than reported consumption during the same period in 2003. These materials were used to make alloys, cemented carbides, mill products, catalysts, and pigments.

Data for U.S. imports and exports through July 2004 are published in this 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 September 1-30, 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:									
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	578	855	734	736
April	W	207	W	28,500	321 ^r	606 ^r	853	749 ^r	730
May	W	68	W	28,400	369 ^r	537 ^r	830	845 ^r	729
June	W	190	W	28,400	326 ^r	581 ^r	947	833 ^r	729
July	W	78	W	28,400	268 ^r	529 ^r	825	828	699
August	W	NA	W	28,400	238	590	830	871	699
Total	W	NA	XX	XX	2,400	4,520	6,730	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:			
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	881 ^r	W
May	W	769 ^r	129
June	W	827 ^r	W
July	W	634 ^r	150
August	W	W	95
Total ³	W	4,550	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.

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

(Metric tons, tungsten content)

Product ³	Net production ²				Stocks at end of period		
	2003	2004		Year to date	2003	2004	
		July ^r	August			July	August
Metal powder	5,350	224	266	1,750	544	481 ^r	512
Tungsten carbide powder (made from metal powder)	3,680	304	324	2,770	263	348 ^r	359
Total	9,030	529	590	4,520	806	828	871

^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		
	July	August	Year to date
Steels	22	22	176
Superalloys	W	W	W
Other alloys (excludes steels and superalloys) ⁴	W	W	W
Cemented carbides ⁵	424	432	3,490
Mill products made from metal powder	W	W	W
Chemical uses	W	W	W
Miscellaneous and unspecified	380	377	3,060
Total	825	830	6,730

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.

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:						
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	855
April	21	W	447	W	6	853
May	22	W	441	W	6	830
June	22	W	445	W	6	947
July	21	W	434	W	6	825
August	21	W	438	W	6	830
Total	172	W	3,550	W	48	6,730
Stocks:						
2003:						
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	317	24	9	407
June	33	31	308	18	9	399
July	31	28	307	27	9	403
August	30	29	313	26	9	406

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:								
May	68	210	15	120	137	139	689	3,580
June	190	150	15	76	112	209	753	4,330
July:								
Austria	--	--	--	2	(3)	2	4	23
Belgium	--	--	--	(3)	--	--	(3)	1
Bolivia	13	--	--	--	--	--	13	203
Canada	37	--	--	10	52	--	99	839
China	--	113	14	7	84	102	321	2,360
Congo (Kinshasa)	--	--	--	--	--	--	--	13
Costa Rica	--	--	--	--	--	--	--	(3)
Czech Republic	--	--	--	--	1	(3)	1	8
France	--	--	--	--	1	(3)	1	6
Germany	--	19	--	37	7	2	65	409
Hong Kong	--	16	--	--	--	6	22	53
Hungary	--	--	--	--	--	(3)	(3)	3
India	--	--	--	--	--	(3)	(3)	3
Israel	--	--	--	--	35	(3)	35	248
Italy	--	--	--	--	--	--	--	33
Japan	--	--	--	3	--	4	7	50
Kenya	--	--	--	--	--	--	--	38
Korea, Republic of	--	--	--	22	--	(3)	22	103
Liechtenstein	--	--	--	--	--	41	41	41
Mexico	--	--	--	--	--	--	--	11
Mongolia	--	--	--	--	--	--	--	15
Netherlands	--	--	--	--	--	(3)	(3)	51
Norway	--	--	--	--	--	(3)	(3)	(3)
Panama	--	--	--	--	--	--	--	(3)
Poland	--	--	--	--	--	--	--	(3)
Portugal	9	--	--	--	--	--	9	171
Russia	--	--	--	--	--	16	16	81
Rwanda	--	--	--	--	--	--	--	105
Singapore	--	--	--	--	--	1	1	5
Spain	--	--	--	--	--	--	--	(3)
Sweden	--	--	--	--	--	(3)	(3)	(3)
Switzerland	--	--	--	--	--	(3)	(3)	(3)
Taiwan	--	--	--	--	--	(3)	(3)	12
Thailand	12	--	--	--	--	--	12	114
Uganda	8	--	--	--	--	--	8	8
United Kingdom	--	--	--	--	(3)	32	32	32
Total	78	148	14	82	179	208	709	5,040
Total, year to date	1,120	1,050	106	747	1,070	948	5,040	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 July 2004 totaled 101 metric tons, tungsten content, to give a year-to-date total of 699 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:							
May	19	18	44	148	139	368	1,500
June	3	18	24	126	59	230	1,730
July:							
Australia	1	--	1	2	(4)	4	28
Austria	--	--	--	6	(4)	6	7
Belgium	--	--	--	(4)	(4)	(4)	12
Brazil	--	--	2	--	5	7	15
Canada	--	--	7	7	3	16	135
Chile	--	--	--	--	--	--	1
China	--	--	--	9	1	10	29
Columbia	--	--	--	--	1	1	4
Czech Republic	--	--	--	--	1	1	9
France	--	--	1	1	(4)	2	126
Georgia	--	--	--	--	(4)	(4)	1
Germany	--	16	7	11	4	39	359
Hong Kong	--	--	--	--	--	--	4
Hungary	--	--	--	--	(4)	(4)	75
India	--	--	--	4	1	5	15
Ireland	--	--	--	--	--	--	4
Israel	--	--	--	(4)	1	1	11
Italy	--	--	4	--	(4)	4	51
Japan	--	--	(4)	2	9	11	69
Korea, Republic of	--	--	(4)	1	(4)	2	28
Luxembourg	--	--	--	--	--	--	26
Malaysia	--	--	--	--	(4)	(4)	12
Mexico	--	--	--	--	30	30	232
Netherlands	--	--	--	(4)	1	1	21
Norway	--	--	--	--	--	--	3
Peru	--	--	--	(4)	--	(4)	3
Philippines	--	--	--	(4)	--	(4)	3
Poland	--	--	--	--	(4)	(4)	1
Romania	--	--	--	--	--	--	1
Singapore	--	--	--	(4)	(4)	(4)	7
South Africa	--	--	--	--	--	--	3
Spain	--	--	(4)	--	1	1	19
Sweden	--	--	(4)	22	(4)	23	34
Switzerland	--	--	(4)	--	(4)	(4)	17
Taiwan	--	--	1	--	63	63	223
Thailand	--	--	--	--	--	--	3
Turkey	--	--	--	(4)	--	(4)	2
United Arab Emirates	--	--	--	--	(4)	(4)	2
United Kingdom	--	--	1	66	2	70	431
Other	--	--	--	(4)	(4)	(4)	2
Total	1	16	24	132	125	298	2,030
Total, year to date	25	125	251	825	800	2,030	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 July 2004 totaled 30 metric tons, tungsten content, to give a year-to-date estimated total of 377 metric tons, tungsten content.

Source: U.S. Census Bureau.