

Mineral Industry Surveys

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TUNGSTEN IN AUGUST 2003

U.S. net production of intermediate tungsten products, including metal powder and tungsten carbide powder produced from metal powder, in January through August 2003 was 12% higher than net production during the same period in 2002, 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 2003 was 11% higher than that consumed during the same period in 2002. These materials were used to make alloys, cemented carbides, mill products, catalysts, and pigments.

Data for U.S. imports and exports for August 2003 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 September 1-30, 2003, are as follows:

Low—\$42/metric ton unit WO₃ (\$38/short ton unit WO₃)
High—\$50/metric ton unit WO₃ (\$45/short ton unit WO₃)

TABLE 1
U.S. SALIENT TUNGSTEN STATISTICS¹

(Metric tons, tungsten content)

Period	Concentrate				Reported scrap consumption	Intermediate products				
	Reported consump- tion	Imports for consumption	Stocks, end of period			Net production ⁴	Reported consump- tion ⁵	Stocks, end of period		
			Industry ²	U.S. Gov- ernment ³			Industry ⁶	U.S. Gov- ernment ³		
2002:										
August	W	418	W	30,500	238	1,030	854	737	987	
September	W	341	W	30,100	429	1,080	810	742	981	
October	W	341	W	30,100	382	1,170	836	705	975	
November	W	509	W	30,100	346	1,160	816	733	948	
December	W	600	W	30,100	360	949	750	666	947	
January-December	W	4,090	XX	XX	4,270	12,000	9,300	XX	XX	
2003:										
January	W	250	W	29,800	362	1,000	788	674	927	
February	W	253	W	29,800	403	965	750	718	927	
March	W	474	W	29,800	476	1,120	777	779	913	
April	W	377	W	29,800	399	1,100	863	785	894	
May	W	679	W	29,600	312	1,120 ^r	904	747 ^r	808	
June	W	365	W	29,600	298	1,150 ^r	893	752 ^r	784	
July	W	463	W	29,600	296 ^r	1,090 ^r	882 ^r	740 ^r	759	
August	W	NA	W	29,500	314	1,080	880	708	759	
Total	W	NA	XX	XX	2,860	8,630	6,740	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
2002:			
August	W	774	97
September	W	800	102
October	W	798	109
November	W	804	85
December	W	W	68
January-December	W	8,860	XX
2003:			
January	W	776	W
February	W	750	61
March	W	851	73
April	W	W	44
May	W	724 ^r	38
June	W	737 ^r	43 ^r
July	W	W	52 ^r
August	W	W	56
Total ³	W	3,840	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				2002	2003	
	2002	July ^f	August	Year to date		July ^f	August
Metal powder	7,970	848	822	6,220	427	453	422
Tungsten carbide powder (made from metal powder)	4,070	241	253	2,400	239	287	286
Total	12,000	1,090	1,080	8,630	666	740	708

^fRevised.

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	2003		
	July	August	Year to date
Steels	20	22	174
Superalloys	25 ^r	24	212
Other alloys (excludes steels and superalloys) ⁴	W	W	W
Cemented carbides ⁵	389	391	3,180
Mill products made from metal powder	W	W	W
Chemical uses	W	W	W
Miscellaneous and unspecified	448	443	3,180
Total	882 ^r	880	6,740

^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.

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:						
2002:						
August	21	W	402	W	6	854
September	22	W	400	W	6	810
October	22	W	403	W	6	836
November	22	W	403	W	6	816
December	23	W	405	W	6	750
January-December	274	W	4,840	W	76	9,300
2003:						
January	21	W	400	W	6	788
February	23	W	395	W	6	750
March	21	W	396	W	6	777
April	23	W	404	W	6	863
May	22	W	404	W	6	904
June	20	W	401	W	6	893
July	20	W	393	W	6	882 ^r
August	22	W	391	W	6	880
Total	172	W	3,180	W	48	6,740
Stocks:						
2002:						
August	24	24	311	25	9	393
September	20	20	275	20	9	344
October	26	22	273	26	9	356
November	21	27	278	22	9	356
December	18	26	293	23	9	368
2003:						
January	25	24	295	19	9	372
February	20	22	292	20	9	362
March	20	20	285	27	9	361
April	15	24	288	22	9	358
May	29	26	292	21	9	376
June	23	24	304	21	9	381
July	21 ^r	22	294	27	9	373 ^r
August	28	23	296	25	9	381

^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
2002	4,090	2,400	480	642	901	1,180	9,690	XX
2003:								
May	679	190	30	69	81	162	1,210	4,240
June	365	407	15	90	161	133	1,170	5,410
July:								
Austria	--	--	--	--	5	3	8	38
Belgium	--	--	--	1	--	--	1	3
Bolivia	26	--	--	--	--	--	26	211
Canada	356	--	--	5	35	(3)	396	2,400
China	--	320	15	5	36	47	422	2,440
Czech Republic	--	--	--	--	--	(3)	(3)	1
France	--	--	--	--	(3)	(3)	(3)	3
Germany	--	--	--	11	3	7	21	265
Hong Kong	--	--	--	--	--	1	1	5
Hungary	--	--	--	--	--	--	--	3
Ireland	--	--	--	--	--	--	--	1
Israel	--	--	--	9	22	1	32	261
Italy	--	--	--	--	--	--	--	(3)
Japan	--	--	--	1	(3)	3	4	118
Kenya	11	--	--	--	--	--	11	11
Korea, Republic of	--	--	--	1	7	--	8	76
Luxembourg	--	--	--	--	--	--	--	7
Mongolia	--	--	--	--	--	--	--	10
Peru	--	--	--	--	--	--	--	21
Portugal	58	--	--	--	--	--	58	336
Russia	--	18	--	--	--	1	19	38
Rwanda	--	--	--	--	--	--	--	102
Singapore	--	--	--	--	--	2	2	5
Spain	--	--	--	(3)	--	(3)	(3)	(3)
Sweden	--	--	--	--	--	(3)	(3)	5
Taiwan	--	--	--	--	--	--	--	15
Tanzania	11	--	--	--	--	--	11	11
Thailand	--	--	--	--	--	--	--	16
United Kingdom	--	21	--	--	--	11	32	53
Other	--	--	--	--	(3)	2	2	3
Total	463	358	15	33	108	77	1,050	6,460
Total, year to date	2,860	1,530	141	489	798	643	6,460	XX

XX Not applicable. -- 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 2003 totaled 117 metric tons, tungsten content, to give a year-to-date total of 732 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
2002	94	69	496	1,250	1,050	2,960	XX
2003:							
May	(4)	53	78	254	98	483	2,020
June	(4)	19	162	134	104	418	2,440
July:							
Australia	--	--	(4)	(4)	--	1	3
Belgium	--	--	--	(4)	1	2	37
Brazil	--	--	3	(4)	(4)	3	27
Canada	--	--	1	4	5	10	118
Chile	--	--	(4)	1	--	1	2
China	--	--	(4)	--	(4)	1	17
Colombia	--	--	--	--	(4)	(4)	1
Czech Republic	--	--	--	--	(4)	(4)	1
Egypt	--	--	--	--	--	--	1
Finland	--	--	--	--	--	--	1
France	(4)	--	2	13	1	16	168
Germany	--	--	17	7	17	42	955
Hong Kong	--	--	--	--	(4)	(4)	6
Hungary	--	--	--	--	(4)	(4)	(4)
India	--	--	64	1	2	67	132
Indonesia	--	--	--	--	--	--	1
Ireland	(4)	--	--	(4)	--	1	12
Israel	--	--	9	--	2	10	97
Italy	--	--	1	(4)	14	15	48
Japan	--	--	1	1	1	3	52
Korea, Republic of	--	--	1	2	(4)	3	19
Luxembourg	--	--	--	1	--	1	7
Malaysia	--	--	(4)	--	4	4	14
Mexico	--	--	--	--	16	16	143
Netherlands	--	--	--	(4)	3	3	75
New Zealand	--	--	--	--	1	1	2
Philippines	--	--	--	--	2	2	14
Poland	--	--	--	--	--	--	2
Singapore	--	--	1	(4)	1	2	11
Slovakia	--	--	--	--	(4)	(4)	5
South Africa	--	--	--	--	--	--	56
Spain	--	--	(4)	--	(4)	(4)	18
Sweden	--	--	41	--	(4)	41	215
Switzerland	--	--	1	--	(4)	1	6
Taiwan	--	--	1	--	22	23	173
Turkey	--	--	--	--	--	--	2
United Kingdom	(4)	--	2	74	3	79	342
Other	--	--	--	(4)	1	1	4
Total	1	--	144	107	94	345	2,790
Total, year to date	5	75	634	1,260	810	2,790	XX

XX Not applicable. -- 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 2003 totaled 28 metric tons, tungsten content, to give a year-to-date total of 268 metric tons, tungsten content.

Source: U.S. Census Bureau.