

Mineral Industry Surveys

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TUNGSTEN IN SEPTEMBER 2005

During the quarter ending September 30, 2005, U.S. net production of intermediate tungsten products, including metal powder and tungsten carbide powder, was 4% lower than net production during the quarter ending June 30, 2005, according to the U.S. Geological Survey. U.S. net production of intermediate tungsten products during the first three quarters of 2005 was 7% higher than net production during the first three quarters of 2004 (revised).

Total U.S. reported consumption of ferrotungsten, tungsten metal powder, tungsten carbide powder, tungsten scrap, and other tungsten materials during the quarter ending September 30, 2005, was slightly higher than reported consumption during the quarter ending June 30, 2005. U.S. reported consumption of these materials during the first three quarters of 2005 was slightly higher than reported consumption during the same period in 2004. They were used to make alloys, cemented carbides, mill products, catalysts, and pigments.

Data for U.S. imports and exports for January through August 2005 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 October 1-31, 2005, are as follows:

Low—\$130/metric ton unit WO₃ (\$118/short ton unit WO₃)
High—\$160/metric ton unit WO₃ (\$145/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 Industry ²	U.S. Gov- ernment ³		Net production ⁴	Reported consump- tion ⁵	Stocks, end of period Industry ⁶	U.S. Gov- ernment ³
2004:									
September	W	255	W	28,400	(7)	598	930	997	724
October	W	218	W	28,400	325	613	948	835	724
November	W	227	W	28,400	275	525	865	794	685
December	W	166	W	28,400	346	534	878	787	685
January-December	W	2,310	XX	XX	3,890	7,400	11,000	XX	XX
2005:									
January	W	171	W	28,400	416	717	961	862	685
February	W	202	W	28,400	415	537	876	757	685
March	W	193	W	27,300	291	707	834	699	685
April	W	230	W	27,200	312	637	907	715	611
May	W	118	W	27,200	433	727	1,030	774	564
June	W	140	W	27,200	376	742	925	770	564
July	W	122	W	27,100	313	542	829 ^r	747	564
August	W	135	W	26,700	506 ^r	746	1,040	834	546
September	W	NA	W	26,700	433	742	1,040	918	518
Total	W	NA	XX	XX	3,490	6,100	8,450	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.

⁷Withheld to avoid disclosing company proprietary data; included in "January-December."

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
2004:			
September	W	697	49
October	W	786	35
November	W	658	37
December	W	587	W
January-December	W	8,790	XX
2005:			
January	W	953	W
February	W	929	W
March	W	979	W
April	W	828	59
May	W	814	110
June	W	864	W
July	W	652	103
August	W	810	118
September	W	765	W
Total	W	7,590	XX

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.

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

(Metric tons, tungsten content)

Product ³	Net production ²				Stocks at end of period		
	2005				2005		
	2004	August	September	Year to date	2004	August	September
Metal powder	3,020	355	279	2,520	438	377	440
Tungsten carbide powder	4,370	392	463	3,570	349	457	477
Total	7,400	746	742	6,100	787	834	917

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

²Receipts plus gross 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	2005		
	August	September	Year to date
Steels	20	19	180
Superalloys	W	W	W
Other alloys (excludes steels and superalloys) ⁴	W	W	W
Cemented carbides ⁵	507	506	4,520
Mill products made from metal powder	W	W	W
Chemical uses	W	W	W
Miscellaneous and unspecified	517 [†]	518	3,740
Total	1,040	1,040	8,450

[†]Revised. 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:						
2004:						
September	20	W	513	W	6	930
October	20	W	505	W	6	948
November	20	W	506	W	6	865
December	19	W	508	W	6	878
January-December	232	W	6,110	W	73	11,000
2005:						
January	20	W	507	W	6	961
February	19	W	517	W	6	876
March	20	W	511	W	6	834
April	20	W	511	W	6	907
May	20	W	505	W	6	1,030
June	20	W	516	W	6	925
July	19	W	505	W	6	829 ^r
August	19	W	515	W	6	1,040 ^r
September	19	W	515	W	6	1,040
Total	176	W	4,600	W	54	8,450
Stocks:						
2004:						
September	25	28	330	23	9	414
October	23	30	374	25	9	460
November	21	28	324	30	9	412
December	20	27	308	19	9	382
2005:						
January	27	28	346	20	9	430
February	26	27	347	16	9	424
March	44	25	348	20	9	446
April	22	28	349	24	9	431
May	20	27	358	26	9	439
June	27	28	364	27	9	455
July	26	28	366 ^r	19	9	447 ^r
August	25	32	353 ^r	19 ^r	9	437 ^r
September	24	29	364	19	9	446

^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	Ferrotungsten	Metal powder	Tungsten carbide powder	Other ²	Total	Total, year to date
2004	2,310	2,090	392	1,490	1,750	1,360	9,400	XX
2005:								
June	140	176	8	155	127	162	767	4,850
July	122	98	--	177	89	254	742	5,590
August:								
Australia	--	--	--	--	--	(3)	(3)	(3)
Austria	--	--	--	--	--	2	2	24
Belgium	--	--	--	5	--	(3)	5	15
Bolivia	26	--	--	--	--	--	26	286
Brazil	--	--	--	--	--	--	--	27
Bulgaria	--	--	--	--	--	--	--	(3)
Canada	--	--	--	--	38	--	38	525
China	--	176	11	138	46	95	465	3,250
Congo (Kinshasa)	--	--	--	--	--	--	--	17
Czech Republic	--	--	--	--	--	(3)	(3)	1
France	--	--	--	--	1	2	3	11
Germany	--	--	--	15	1	1	16	429
Hong Kong	--	--	--	--	--	1	1	104
Hungary	--	--	--	--	--	(3)	(3)	4
India	--	--	--	--	(3)	4	4	13
Ireland	--	--	--	--	--	--	--	2
Israel	--	--	--	13	20	3	36	367
Italy	--	--	--	--	--	--	--	(3)
Japan	--	--	--	2	(3)	5	7	49
Korea, Republic of	--	--	--	9	(3)	(3)	9	89
Luxembourg	--	--	--	--	--	--	--	(3)
Malaysia	--	--	--	--	--	--	--	(3)
Mexico	--	--	--	--	--	--	--	16
Mongolia	--	--	--	--	--	--	--	1
Netherlands	--	--	--	--	--	(3)	(3)	(3)
New Zealand	--	--	--	--	--	--	--	(3)
Peru	--	--	--	(3)	--	--	(3)	(3)
Poland	--	--	--	--	--	(3)	(3)	(3)
Portugal	82	--	--	--	--	--	82	527
Russia	--	--	--	--	--	1	1	266
Rwanda	11	--	--	--	--	--	11	115
Singapore	--	--	--	--	--	(3)	(3)	13
South Africa	--	--	--	--	--	--	--	9
Spain	--	--	--	--	--	(3)	(3)	1
Sweden	--	--	--	--	--	(3)	(3)	(3)
Switzerland	--	--	--	--	--	--	--	2
Taiwan	--	--	--	--	--	(3)	(3)	(3)
Thailand	16	--	--	--	--	--	16	130
Ukraine	--	--	--	--	--	(3)	(3)	(3)
United Kingdom	--	--	--	--	(3)	2	2	7
Vietnam	--	--	--	--	--	--	--	19
Total	135	176	11	182	106	117	728	6,320
Total, year to date	1,310	1,320	292	1,180	1,150	1,060	6,320	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 ½ unit.

Note: Imports of waste and scrap in August 2005 totaled 260 metric tons, tungsten content, to give a year-to-date total of 1,500 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
2004	43	125	433	1,440	1,210	3,240	XX
2005:							
June	1	81	67	115	117	381	2,630
July	--	84	56	127	178	444	3,070
August:							
Argentina	--	--	--	(4)	(4)	(4)	1
Australia	--	--	1	(4)	1	2	30
Austria	--	--	--	--	--	--	5
Belgium	--	--	--	--	(4)	(4)	2
Brazil	--	--	(4)	1	4	5	27
Canada	--	--	4	8	11	24	624
Chile	--	--	(4)	--	--	(4)	1
China	--	291	(4)	--	(4)	292	391
Colombia	--	--	--	--	1	1	5
Czech Republic	--	--	--	--	1	1	37
Denmark	--	--	--	--	--	--	5
France	--	--	1	2	(4)	4	92
Germany	--	59	8	33	14	114	745
Hungary	--	--	--	--	5	5	15
Iceland	--	--	--	--	--	--	7
India	--	--	1	4	(4)	6	26
Indonesia	--	--	--	--	(4)	(4)	1
Ireland	--	--	--	(4)	1	1	10
Israel	--	--	--	--	--	--	32
Italy	--	--	(4)	--	2	2	29
Japan	--	--	1	(4)	11	12	162
Korea, Republic of	--	--	(4)	(4)	(4)	1	25
Luxembourg	--	--	--	(4)	--	(4)	1
Malaysia	--	--	--	--	1	1	13
Martinique	--	--	--	--	--	--	4
Mexico	--	--	(4)	1	4	6	75
Netherlands	--	--	(4)	--	1	1	28
Norway	--	--	--	--	(4)	(4)	2
Peru	--	--	--	--	--	--	4
Philippines	--	--	--	--	(4)	(4)	3
Russia	--	--	--	--	(4)	(4)	3
Saudi Arabia	--	--	--	--	(4)	(4)	1
Singapore	--	--	1	(4)	(4)	1	26
South Africa	--	--	(4)	11	--	12	63
Spain	--	--	(4)	--	(4)	(4)	46
Sweden	--	--	--	20	5	24	205
Switzerland	--	--	--	--	(4)	(4)	10
Taiwan	--	--	--	(4)	38	38	288
Thailand	--	--	--	(4)	--	(4)	3
Turkey	--	--	(4)	--	--	(4)	3
United Arab Emirates	--	--	(4)	--	(4)	(4)	1
United Kingdom	--	--	13	18	15	46	537
Venezuela	--	--	4	--	(4)	4	33
Yemen	--	--	--	--	--	--	41
Yugoslavia	--	--	--	(4)	--	(4)	5
Other	(4)	--	(4)	(4)	(4)	1	4
Total	(4)	351	38	101	115	604	3,670
Total, year to date	29	565	508	1,080	1,490	3,670	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 ½ unit.

Note: Estimated exports of waste and scrap in August 2005 totaled 108 metric tons, tungsten content, to give a year-to-date total of 605 metric tons, tungsten content.

Source: U.S. Census Bureau.