# IRON AND STEEL SLAG STATISTICS<sup>1</sup> U.S. GEOLOGICAL SURVEY

[All values in metric tons (t) iron & steel slag unless otherwise noted]

Last modification: October 1, 2008

	Production	Last III0	dification:	· · · · · · · · · · · · · · · · · · ·		
<b>V</b> 200		T 04 a	E	Apparent		
Year	(Sales)	Imports	Exports	consumption	(\$/t)	(98\$/t)
1942	17,300,000			17,300,000	0.84	8.40
1943	15,000,000			15,000,000	0.93	8.76
1944	11,300,000			11,300,000	0.97	8.98
1945	11,500,000			11,500,000	1.00	9.06
1946	15,200,000			15,200,000	1.08	9.03
1947	17,800,000			17,800,000	1.21	8.84
1948	19,200,000			19,200,000	1.29	8.72
1949	19,600,000			19,600,000	1.38	9.45
1950	22,600,000			22,600,000	1.44	9.74
1951	26,600,000			26,600,000	1.50	9.40
1952	24,400,000			24,400,000	1.53	9.41
1953	27,700,000			27,700,000	1.60	9.77
1954	26,500,000			26,500,000	1.64	9.94
1955	29,400,000			29,400,000	1.73	10.50
1956	32,000,000			32,000,000	1.72	10.30
1957	29,800,000			29,800,000	1.86	10.80
1958	25,800,000			25,800,000	1.60	9.02
1959	25,700,000			25,700,000	2.02	11.30
1960	26,100,000			26,100,000	2.02	11.10
1961	23,300,000			23,300,000	2.04	11.10
1962	21,300,000			21,300,000	2.12	11.40
1963	21,500,000			21,500,000	2.12	11.30
1964	24,400,000			24,400,000	2.10	11.00
1965	27,300,000			27,300,000	2.08	10.80
1966	28,400,000			28,400,000	1.81	9.11
1967	31,300,000			31,300,000	1.90	9.27
1968	31,700,000			31,700,000	1.92	8.99
1969	33,600,000			33,600,000	2.02	8.97
1970	30,600,000	1,720	26,400	30,600,000	2.00	8.40
1971	30,200,000	2,110	19,700	30,200,000	2.13	8.57
1972	31,900,000	1,320	24,900	31,900,000	2.22	8.66
1973	35,000,000	1,150	33,700	35,000,000	2.30	8.44
1974	35,100,000		47,100	35,100,000	2.41	7.97
1975	29,600,000			29,600,000	2.70	8.18
1976	29,600,000			29,600,000	2.97	8.51
1977	29,400,000			29,400,000	3.08	8.28
1978	33,400,000			33,400,000	3.33	8.33
1979	32,400,000			32,400,000	3.76	8.44
1980	22,900,000			22,900,000	4.46	8.82
1981	19,500,000			19,500,000	4.77	8.55
1982	17,700,000			17,700,000	4.95	8.36
1983	16,700,000			16,700,000	5.24	8.58
1984	20,000,000			20,000,000	5.66	8.88
1985	19,100,000	10,900	379,000	18,700,000	6.02	9.12
1986	19,100,000	27,200	18,100	19,100,000	6.38	9.49
1987	19,300,000	121,000	331,000	19,100,000	5.99	8.59
1988	19,600,000	155,000	1,000	19,800,000	6.10	8.40
1989	20,700,000	100,000	7,000	20,800,000	5.77	7.58
1990	21,900,000	227,000	5,000	22,100,000	5.78	7.21
1991	20,300,000	150,000	5,000	20,400,000	6.60	7.90
1992	21,400,000	100,000	4,000	21,500,000	6.25	7.26
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# $\begin{array}{c} \textbf{IRON AND STEEL SLAG STATISTICS}^1 \\ \textbf{U.S. GEOLOGICAL SURVEY} \end{array}$

[All values in metric tons (t) iron & steel slag unless otherwise noted]

Last modification: October 1, 2008

	Production			Apparent	Unit value	Unit value
Year	(Sales)	<b>Imports</b>	<b>Exports</b>	consumption	( <b>\$/t</b> )	(98\$/t)
1993	19,000,000	162,000	4,000	19,200,000	6.63	7.48
1994	20,100,000	199,000	4,000	20,300,000	6.97	7.67
1995	21,000,000	280,000	4,000	21,300,000	6.86	7.34
1996	20,500,000	346,000	3,000	20,800,000	6.88	7.15
1997	18,900,000	663,000	9,000	19,600,000	7.25	7.36
1998	18,400,000	700,000	10,000	19,100,000	8.15	8.15
1999	17,100,000	920,000	12,000	18,000,000	8.21	8.03
2000	16,300,000	1,200,000	20,000	17,500,000	8.65	8.19
2001	16,900,000	2,600,000	50,000	19,500,000	8.05	7.41
2002	19,100,000	1,100,000	100,000	19,100,000	15.50	14.00
2003	19,700,000	1,100,000	100,000	19,700,000	15.00	13.30
2004	21,200,000	1,000,000	100,000	21,100,000	15.50	13.40
2005	21,600,000	1,600,000	35,000	21,600,000	17.60	14.70
2006	20,300,000	1,600,000	98,000	20,200,000	20.00	16.20
2007	17,000,000	1,900,000	54,000	16,900,000	25.00	19.70

<sup>&</sup>lt;sup>1</sup>Compiled by T.D. Kelly (retired), R.S. Kalyoncu (retired), and H.G. van Oss. Data are calculated, estimated, or reported. See notes for more information.

# **Iron and Steel Slag Worksheet Notes**

#### **Data Sources**

The sources of data for the slag—iron and steel worksheet are the mineral statistics publications of the U.S. Bureau of Mines and the U.S. Geological Survey—Minerals Yearbook (MYB) and Mineral Commodity Summaries (MCS). Blank cells in the worksheet indicate that data were not available.

#### **Production (Sales)**

Production data of iron and steel slag is the sum of blast furnace slag and steel slag reported as total sales in the MYB for the years 1942–2000. Data for the years 2001 to the most recent are reported in the MCS. Due to the length of materials remaining in stockpiles for longer than the usual yearly turnaround, data estimates may be less accurate. Data on total slag production are not collected.

#### **Imports**

Imports are reported from the MYB for the years 1970–73 as the sum of slag, dross, and scaling. For the years 1985 to the most recent, imports are reported in the MCS as "imports." For the years 1942–69 and 1974–84, import data were not available.

#### **Exports**

Exports are reported from the MYB for the years 1970–74 as the sum of slag, dross, and scaling. For the years 1985 to the most recent, exports are reported in MCS as "exports." For the years 1942–69 and 1975–84, export data were not available. The reported amount of exports for the years 2002 to the most recent is considerably higher than that of previous years, due to the addition of granulated slag, which had not been included in exports statistics previously.

## **Apparent Consumption**

Apparent consumption was estimated by the following formula:

## APPARENT CONSUMPTION = PRODUCTION (SALES) + IMPORTS – EXPORTS.

For the years that imports and exports were not available, production (sales) was assumed equal to apparent consumption. Data for the years 2001 to the most recent are reported in the MCS.

# **Unit Value (\$/t)**

Unit value is defined as the value in current dollars of 1 metric ton (t) of slag apparent consumption. Unit value was estimated by dividing total slag production value by total slag production quantity, (as defined above). Data prior to 2001 are reported from the MYB. Unit value data for the years 2001 to the most recent are the average value f.o.b. plant, reported in the MCS. The higher unit value for the years 2002 to the most recent represents more complete data on sales of ground granulated blast furnace slag, value at almost \$60.00 per ton as opposed to air-cooled blast furnace and steel slags, valued from \$4.00 to \$7.00 per ton.

## Unit Value (98\$/t)

The Consumer Price Index conversion factor, with 1998 as the base year, is used to adjust unit value in current U.S. dollars to the unit value in constant 1998 U.S. dollars.

#### References

- U.S. Bureau of Mines, 1945–96, Minerals Yearbook, 1942–94.
- U.S. Bureau of Mines, 1978–95, Mineral Commodity Summaries, 1978–95.
- U.S. Geological Survey, 1997–2008, Mineral Commodity Summaries, 1997–2008.
- U.S. Geological Survey, 1997–2008, Minerals Yearbook, v. I, 1995–2007.
- U.S. Geological Survey and U.S. Bureau of Mines, 1996, Mineral Commodity Summaries, 1996.

### **Recommended Citation Format:**

U.S. Geological Survey, [year of last update, e.g., 2005], [Mineral commodity, e.g., Gold] statistics, *in* Kelly, T.D., and Matos, G.R., comps., Historical statistics for mineral and material commodities in the United States: U.S. Geological Survey Data Series 140, available online at http://pubs.usgs.gov/ds/2005/140/. (Accessed [date].)

### For more information, please contact:

**USGS Iron and Steel Slag Commodity Specialist**