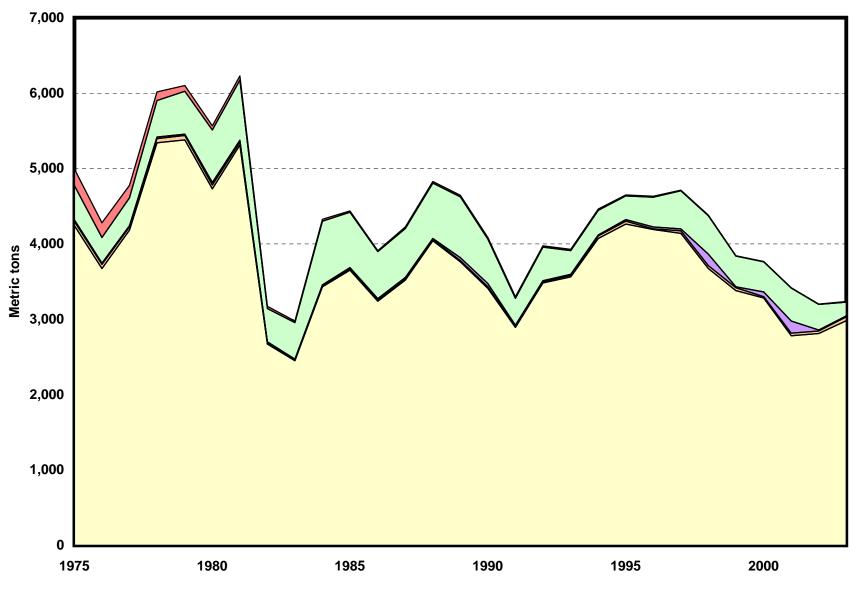
### VANADIUM END-USE STATISTICS<sup>1</sup> U.S. GEOLOGICAL SURVEY [Metric tons] Last modification: September 1, 2005

| <b>X</b> 7 |       |            |             | 0.1          | Chemical and | Apparent    |
|------------|-------|------------|-------------|--------------|--------------|-------------|
| Year       | Steel | Cast irons | Superalloys | Other alloys | ceramic      | consumption |
| 1975       | 4,240 | 54         | 24          | 454          | 219          | 4,990       |
| 1976       | 3,670 | 55         | 17          | 342          | 194          | 4,280       |
| 1977       | 4,180 | 43         | 17          | 370          | 165          | 4,770       |
| 1978       | 5,340 | 54         | 24          | 483          | 113          | 6,020       |
| 1979       | 5,380 | 56         | 18          | 571          | 75           | 6,10        |
| 1980       | 4,730 | 49         | 35          | 697          | 55           | 5,57        |
| 1981       | 5,310 | 38         | 28          | 798          | 53           | 6,23        |
| 1982       | 2,670 | 18         | 11          | 443          | 28           | 3,170       |
| 1983       | 2,450 | 9          | 13          | 484          | 18           | 2,97        |
| 1984       | 3,430 | 16         | 9           | 847          | 22           | 4,32        |
| 1985       | 3,650 | 20         | 15          | 735          | 15           | 4,43        |
| 1986       | 3,240 | 22         | 11          | 625          | 12           | 3,92        |
| 1987       | 3,520 | 22         | 9           | 652          | 19           | 4,22        |
| 1988       | 4,040 | 20         | 9           | 738          | 18           | 4,83        |
| 1989       | 3,760 | 18         | 38          | 808          | 21           | 4,65        |
| 1990       | 3,410 | 18         | 43          | 593          | 18           | 4,08        |
| 1991       | 2,890 | 15         | 16          | 357          | 19           | 3,29        |
| 1992       | 3,480 | 17         | 14          | 446          | 16           | 3,98        |
| 1993       | 3,560 | 21         | 15          | 314          | 17           | 3,93        |
| 1994       | 4,070 | 33         | 16          | 325          | 18           | 4,46        |
| 1995       | 4,260 | 40         | 20          | 316          | 14           | 4,65        |
| 1996       | 4,190 | 10         | 23          | 395          | 13           | 4,63        |
| 1997       | 4,140 | 33         | 24          | 506          | 11           | 4,71        |
| 1998       | 3,670 | 41         | 152         | 510          | 6            | 4,38        |
| 1999       | 3,380 | 37         | 13          | 407          | 5            | 3,84        |
| 2000       | 3,280 | 20         | 61          | 400          | 5            | 3,77        |
| 2001       | 2,780 | 33         | 164         | 436          | 5            | 3,42        |
| 2002       | 2,810 | 36         | 13          | 338          | 5            | 3,20        |
| 2003       | 2,980 | 50         | 13          | 185          | 5            | 3,23        |

<sup>1</sup>Compiled by G.R. Matos and M.J. Magyar.

# **End Uses of Vanadium**



□ Steel □ Cast irons □ Superalloys □ Other alloys □ Chemical and ceramic

## Vanadium End-Use Worksheet Notes

#### **Data Sources**

The sources of data for the vanadium end-use worksheet are the Minerals Yearbook (MYB), an annual collection, compilation, and analysis of mineral industry data, published by the U.S. Bureau of Mines and the U.S. Geological Survey, and proprietary data reports.

#### End Use

End use is defined as the use of the mineral commodity in a particular industrial sector or product. For vanadium, end-use categories are steel, cast iron, superalloys, other alloys, and chemical and ceramic.

End-use data reported in this table differs from that reported in the MYB during the time period of 1975–2002. The categories have been grouped differently and the data have been revised based on new information.

Apparent consumption reproduces reported consumption values from the MYB. For consistency within the historical statistics series, the column is titled apparent consumption.

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

#### References

U.S. Bureau of Mines, 1977–96, Minerals Yearbook, v. I, 1975–94.

U.S. Geological Survey, 1997–2005, Minerals Yearbook, v. I, 1995–2003.

#### **Recommended Citation Format:**

(1) If taken from CD version:

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, one CD-ROM. (Also available online at http://pubs.usgs.gov/ds/2005/140/.)

(2) If taken from online version:

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 Vanadium Commodity Specialist**