



2008 Minerals Yearbook

AUSTRIA

THE MINERAL INDUSTRY OF AUSTRIA

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Although Austria has diverse mineral resources and a long tradition of mining, metal mining activity decreased there during the past few years (through 2008) owing principally to environmental concerns, high mining costs, low ore grades and reserves, and increased foreign competition. All metal mines except the open pit iron ore operation at Erzberg and the underground tungsten operation at Mittersill were closed before 2008. This was not the case with the industrial minerals sector, however, which produced a number of minerals, including dolomite, gypsum, lime, limestone, and marble. If production of magnesite and tungsten in the United States can be assumed to have been lower than that in Austria in 2008, Austria was estimated to have been the 4th ranked producer of tungsten in the world and the 5th ranked producer of magnesite. The country also accounted for about 1% of the world's production of natural gypsum in 2008 (including production by the United States). Mineral resources occur throughout the country, and the State of Styria in particular was considered to have large deposits of minerals (Crangle, 2009; Kramer, 2009; Shedd, 2009).

Production

In 2008, production of secondary copper metal increased substantially compared with that of 2007 owing to technological improvements at the Brixlegg plant, and production of kaolin by Österreichische Kaolin- und Montanindustrie AG decreased significantly during the same timeframe. The substantial increase in production of lime in the country appeared to be owing to increases in the production of quicklime and ground hydrated lime by about 148% and 40%, respectively, although information concerning the locations where these increases in production occurred was not available. Production of rock salt decreased substantially, mostly in reaction to decreased demand for salt for use in deicing compounds during relatively mild winter weather in the first few months of the year and a late start to winter in the latter part of the year. Production of evaporated salt increased substantially, mostly owing to the startup of salt evaporator no. 4 by Salinen Austria AG in October 2007 (table 1; A-Tec Industries AG, 2009, p. 24, 44-45; Bundesanstalt Statistik Österreich, 2009, p. 186-189; Bundesministerium für Wirtschaft, Familie und Arbeit, 2009a, p. 16, 36-44; Fachverband der Stein- und Keramischen Industrie Österreich, 2009, p. 22).

Data on Austria's mineral production are in table 1. The data series for production of iron and steel were revised based upon data in the Bundesministerium für Wirtschaft, Familie und Arbeit (BMWFA)'s Österreichisches Montan-Handbuch (ÖMHB) 2009, and the revised data were checked for agreement with corresponding data in the World Steel Association's Steel Statistical Yearbook 2009. The data for the W content of tungsten concentrate production were also revised based upon data in ÖMHB 2009 and in BMWFA's World Mining Data 2009. Most of the revisions to data for the production of

industrial minerals were based upon data in ÖMHB 2009, but revisions to the data on production of cement in the country were based upon data in Vereinigung der Österreichischen Zementindustrie's Nachhaltigkeitsbericht 2008/2009 der österreichischen Zementindustrie. Also, revisions to the data for production of lime in Austria were based upon data in Fachverband der Stein- und Keramischen Industrie Österreich's Annual Report 08/09 and in Bundesanstalt Statistik Österreich [Federal Statistics Institute of Austria]'s Konjunkturstatistik im produzierenden Bereich. Revisions to the data for production of mineral fuels were also mostly based upon data in ÖMHB 2009 (table 1; Bundesanstalt Statistik Österreich, 2009, p. 186-189; Bundesministerium für Wirtschaft, Familie und Arbeit, 2009a, p. 16, 31-37, 42-45; 2009b, p. 8-10, 146, 174; Vereinigung der Österreichischen Zementindustrie, 2009, p. 34-35; World Steel Association, 2010, p. 3, 38, 100, 109).

Structure of the Mineral Industry

Although most of the Austrian mineral industry was privately owned, a portion of the industry was still under Government control. Österreichische Industrieholding AG (ÖIAG) was the investment and privatization agency of the Government. Table 2 is a list of major mineral industry facilities, but this information has not been updated much for 2008. More-extensive coverage of the mineral industry of Austria can be found in the 2007 U.S. Geological Survey Minerals Yearbook, volume III, Area Reports—International—Europe and Central Eurasia, which is available on the Internet at <http://minerals.usgs.gov/minerals/pubs/country>.

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TABLE 1
AUSTRIA: PRODUCTION OF MINERAL COMMODITIES¹

(Thousand metric tons unless otherwise specified)

Commodity	2004	2005	2006	2007	2008
METALS					
Aluminum, metal, secondary ^e	150,000 ^r	150,000 ^r	150,000	150,000 ^r	150,000
Copper, metal, secondary:					
Smelter	59,400	52,700	65,900	80,200	94,200 ^p
Refined	74,245	72,316	72,600	81,400 ^r	106,700 ^p
Gold, metal ^e	-- ^r	-- ^r	-- ^r	--	--
Iron and steel:					
Iron ore:					
Gross weight	1,889 ^r	2,048	2,093 ^r	2,153	2,033
Fe content	605 ^r	665 ^r	669 ^r	689 ^r	650 ^e
Metal:					
Pig iron	4,847	5,444	5,547	5,808 ^r	5,795
Ferroalloys, electric arc furnace, gross weight ^e	14 ^r	14 ^r	14 ^r	14 ^r	14
Crude steel	6,530	7,031	7,129 ^r	7,578 ^r	7,594
Semimanufactures, hot-rolled products	6,017 ^r	6,164 ^r	6,495 ^r	6,816 ^r	6,850 ^e
Lead, refined, secondary	23,826 ^r	24,357 ^r	28,120 ^r	28,564 ^r	26,902
Manganese, Mn content of domestic iron ore ^e	16,000	16,000	16,000	15,000	15,000
Tungsten ore and concentrate:					
Ore:					
Gross weight	447,982	472,964	400,182	435,006	434,296
W content ^e	1,600	1,550	1,310	1,270	1,250
Concentrate, W content	1,335 ^r	1,280 ^r	1,153 ^r	1,117 ^r	1,122
INDUSTRIAL MINERALS					
Cement:					
Clinker	3,223	3,221	3,654	3,992	4,004
Hydraulic	4,356 ^r	4,560 ^r	4,852 ^r	5,203 ^r	5,309
Clays:					
Kaolin, crude	105	56	52	57	50
Common, including brick clay and illite	2,013	2,410 ^r	2,868 ^r	2,362 ^r	2,371
Diabase (of basaltic rocks)	2,271	1,230	1,885	2,242	2,280
Graphite, crude	--	--	--	--	250
Gypsum and anhydrite, crude:					
Gypsum	921	911	936	1,006	1,023
Anhydrite	117	106	135	57	64
Lime, including quicklime	500 ^{r,e}	465 ^{r,e}	473 ^r	497 ^r	909
Of which, marketed	496	460	465	491	612
Magnesite:					
Crude	715	694	769	812	837
Sintered or dead-burned	267	304	270 ^r	288 ^r	290
Caustic calcined	161	98	98 ^r	51 ^r	50
Nitrogen, N content of ammonia ^e	440	400	400	400	400
Pigments, mineral, micaceous iron oxide ^e	5,000	5,000	5,000	5,000	5,000
Pumice (trass), crude	-- ^r	2,943	-- ^r	-- ^r	--
Salt (NaCl):					
Brines, gross	3,430	3,409	3,451	3,195	3,778
Evaporated, mechanical heating process	--	769,955	764,189	726,430	866,674
Rock	1,228	1,497	1,446	1,172	503
Mine output, NaCl content	1,030	1,024	807 ^r	742 ^r	1,134
Sand and gravel:					
Quartz sand	764 ^r	1,610 ^r	2,008	1,890 ^r	2,150
Sand and gravel, unspecified	5,886	6,003 ^r	18,995 ^r	21,391 ^r	27,315
Total	6,650 ^r	7,613 ^r	21,003 ^r	23,281 ^r	29,465
Sodium compounds, manufactured, n.e.s. ^{e,2}					
Soda ash	150	100	100	100	100
Sulfate	100	100	100	100	100

See footnotes at end of table.

TABLE 1—Continued
AUSTRIA: PRODUCTION OF MINERAL COMMODITIES¹

(Thousand metric tons unless otherwise specified)

Commodity	2004	2005	2006	2007	2008
INDUSTRIAL MINERALS—Continued					
Stone:					
Amphibolite	281	197	667	754	825
Basalt, not included in diabase	2,926 ^r	3,166	1,947 ^r	1,902 ^r	1,795
Dolomite	5,907	6,291	3,411 ^r	4,296 ^r	4,435
Gneiss	29	42	513	902	1,089
Granite and granulite	126	788	2,503	1,858	3,055
Limestone, marble, and serpentine	24,158	25,342 ^r	23,192 ^r	23,462 ^r	24,620
Marl	1,747	1,479	2,062 ^r	2,115 ^r	1,826
Quartz, quartzite, and pegmatite	294	249	290	306	322
Other, including conglomerate	-- ^r	-- ^r	14 ^r	80 ^r	99
Total	35,468 ^r	37,554 ^r	34,599 ^r	35,675 ^r	38,066
Sulfur, byproduct of petroleum and natural gas	10,705	8,458	10,166 ^r	10,786 ^r	8,016
Talc and soapstone, crude	136,305	166,569	159,447	153,409	154,577
MINERAL FUELS AND RELATED MATERIALS					
Coal, brown and lignite	235	14 ^r	8 ^r	-- ^r	--
Coke	1,400 ^r	1,388 ^r	1,283 ^r	1,422 ^r	1,410
Natural gas:					
Marketable (net)	2,011	1,654	1,765	1,835 ^r	1,544
Natural gas liquids	939	814	919	868	836
Oil shale	248	--	287 ^r	4 ^r	114
Petroleum:					
Crude ³	6,274 ^r	6,018 ^r	6,028 ^r	6,009 ^r	6,066
Refinery products:					
Liquefied petroleum gas	661	1,241	587	813	1,134 ⁴
Gasoline	14,773	15,283	13,719	14,467	14,400 ⁴
Kerosene and jet fuel	3,534	4,596	4,084	4,688	3,660
Distillate fuel oil	7,691 ^r	7,796 ^r	6,828	5,755 ^r	5,280 ⁴
Residual fuel oil	6,061	6,141	6,687	4,052	6,600 ⁴
Unspecified	33,075	31,654	31,787	34,454	34,500
Refinery fuel and losses	5,068	4,627	243 ^r	173 ^r	154
Total	70,863 ^r	71,338 ^r	63,935 ^r	64,402 ^r	65,728

⁶Estimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. ^rRevised. do. Ditto. -- Zero.

¹Table includes data available through March 8, 2010.

²Not elsewhere specified.

³All figures were converted to barrels from metric tons according to a conversion factor of 7.040 barrels of crude oil per metric ton. Source: U.S. Energy Information Administration, [undated], International Energy Statistics—Austria: Washington, DC, U.S. Energy Information Administration. (Accessed March 7, 2010, at <http://tonto.eia.doe.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=94&pid=57&aid=32>.)

⁴Figure converted to barrels from metric tons according to a conversion factor. Source: U.S. Energy Information Administration, 2008, International Energy Annual—Table C.1, General Conversion Factors: Washington, DC, U.S. Energy Information Administration. June-December. (Accessed March 7, 2010, at <http://www.eia.doe.gov/emeu/iea/tablec1.html>), and reflects the significant digits of the conversion factor.

TABLE 2
AUSTRIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2008

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners ¹	Location of main facilities	Annual capacity
Alumina, fused	Treibacher Schleifmittel AG	Plant at Villach	100.
Aluminum	Aluminum Lend GmbH (Salzburger Aluminium AG, 100%)	Secondary ingot plant at Lend	25.
Do.	AMAG Casting GmbH (Amag Austria Metall, 100%)	Secondary ingot plant at Ranshofen	50.
Cement	Lafarge Perlmooser AG (Lafarge Group, 100%)	Plants at Mannesdorf and Retsnei; grinding plant at Kirchbichl	2,200.
Do.	Wietersdorfer & Peggauer Zementwerke GmbH	Plants at Peggau and Wietersdorf	1,000.
Do.	Zementwerk Leube GmbH	Plant at Gartenau	700.
Do.	SPZ Zementwerke Eiberg GmbH	Plant at Eiberg	600.
Do.	Gmundner Zement	Plant at Gmundner	580.
Coal	Graz-Koflacher Eisenbahn und Bergbaugesellschaft GmbH (Government, 100%)	Oberdorf Mine, Barnbach (closed)	1,200.
Copper, secondary	Montanwerke Brixlegg AG (A-Tec Industries AG, 100%)	Plant at Brixlegg	75 cathode, 66 billet.
Ferroalloys, FeV, FeMo, FeNi	Treibacher Industries AG	Plants at Althofen and Treibach	10.
Graphite	Industrie und Bergbaugesellschaft Pryssok & Co KG	Trandorf Mine at Mühldorf	15.
Do.	Grafitbergbau Kaiserberg AG	Kaisersberg Mine	3.
Do.	do.	Trieben Mine	3.
Gypsum	Erste Salzburger Gipswerk-Gesellschaft Christian Moldan KG	Abtenau and Moosegg Mines	300.
Do.	Rigips Austria GmbH	Grundlsee, Puchberg, Unterkainisch, and Weisenbach Mines	250.
Do.	Knauf Gesellschaft GmbH	Hinterstein Mine	160.
Iron ore	Voest-Alpine Erzberg GmbH	Erzberg Mine at Eisenerz	3,000.
Kaolin, crude	Österreichische Kaolin- und Montanindustrie AG	Aisthofen-Weinzierl and Kriechbaum Mines	170.
Lead	Bleiberg Bergwerks-Union AG (Metall Gesellschaft, 74%)	Smelter at Brixlegg	55.
Magnesite	Veitsch-Radex GmbH (RHI AG, 100%)	Mines at Breitenau, Hochfilzen, Radenthein, Trieben, and Veitsch	800.
Natural gas	million cubic meters Österreichische Aktiengesellschaft (OMV) (Government, 100%)	Fields in Vienna Basin	1,500.
Nitrogen, N content of ammonia	Agrolinz AG	Plant at Linz	498.
Salt	Österreichische Salinen GmbH (Invest Holding GmbH, 100%)	Mines at Bad Ischl	800.
Steel, crude	Voest-Alpine Stahl AG	Plants at Donawitz and Linz	8,500.
Talc	Luzenac Naintsch AG	Mines at Lassing, Rabenwald, and Weisskirchen; plants at Oberfeistitz and Weisskirchen	160.
Tungsten, W content	Wolfram Bergbau- und Hütten- GmbH Nfg.KG	Mittersill Mine, Felbertal, Salzburg; conversion plant, Bergla	350.

Do., do. Ditto.

¹More industrial minerals companies are listed in the Industrial Minerals Directory, 2008.