

2016 Minerals Yearbook

AUSTRIA

THE MINERAL INDUSTRY OF AUSTRIA

By Sinan Hastorun

The mineral industry of Austria involved mainly extraction of industrial minerals and the processing of metals. In 2016, Austria was the fifth-ranked producer of magnesite in the world (excluding the United States) and tungsten, accounting for 2.5% and 1.1% of world production, respectively (table 1; Bundesministerium für Wissenschaft, Forschung, und Wirtschaft, 2017, p. 3–9; Bray, 2018; Shedd, 2018).

Minerals in the National Economy

Austria's real gross domestic product (GDP) increased by 1.5% in 2016 compared with that of 2015; the nominal GDP was \$371.8 billion¹ in 2016. The value of output of the hydrocarbon sector was \$7.7 billion; the mining and ferrous metals sector, \$7.1 billion; the nonferrous metals sector, \$4.1 billion; and the building materials, ceramics, and stone sector, \$3.4 billion. In 2016, petroleum and gas output increased by 4.6%; mining and quarrying output, by 4.4%; and nonmetallic mineral products output, by 2.8%; base metals output remained about the same. Of the total exports of \$139.6 billion in 2016, manufactured ferrous metals made up 5.4%; nonferrous metals, 2.4%; and nonmetallic mineral products, 1.6% (Österreichisches Institut für Wirtschaftsforschung, 2017; Wirtschaftskammer Österreich, 2017, p. 26, 50, 61).

Production

In 2016, the output of crude magnesite decreased by about 20%, and that of tungsten ore output (gross weight), by 4%. Minerals with a significant increase in production compared with that of 2015 included quartz and quartzite, which increased by 22%; nickel, by 19%; kaolin, by 14%; and tungsten concentrate (W content), by 11%. The production of quartz sand decreased by 23%; crude petroleum, by 11%; and bentonite, brick clay, and illite together, by 10% (table 1).

Structure of the Mineral Industry

In 2016, there were 1,109 mining and quarrying operations and 2 operations that produced crude petroleum and (or) natural gas in Austria. Of the mining and quarrying operations, 1,106 produced industrial minerals. Six mines produced salt, two mines produced iron ore and micaceous iron oxide, and one mine produced tungsten (table 2; Bundesministerium für Wissenschaft, Forschung, und Wirtschaft, 2017, p. 10).

Commodity Review

Metals

Aluminum.—In 2016, AMAG Austria Metall AG's global metal shipments, primarily from Austria, increased slightly to 121,200 metric tons (t), and its shipments of rolled aluminum products increased by 13% to 198,500 t. Sales of recycled aluminum foundry alloys by the casting division increased slightly to 86,700 t. AMAG's ongoing expansion of the Ranshofen ingot plant was aimed at increasing the plant's production capacity to 300,000 metric tons per year by 2020 (AMAG Austria Metall AG, 2017, p. 8, 9, 15).

Iron and Steel.—VA Erzberg GmbH's production of iron ore decreased slightly to 2.78 million metric tons (Mt) in 2016. The company supplied iron ore from the Erzberg Mine in Eisenerz to voestalpine Stahl GmbH's steel plants in Donawitz and Linz. In preparation for a planned blast furnace relining in Linz in December, voestalpine Stahl reduced the use of ore beginning in August 2016. As a result, the tonnage of VA Erzberg's iron ore shipments decreased slightly to 2.753 Mt in 2016. Böhler Schmiedetechnik GmbH & Co KG, which was a subsidiary of voestalpine Stahl, was in the process of constructing a new forging line at the Kapfenberg plant; the new line was scheduled to begin operation in 2018. The plant would produce primarily pre-material for stress-resilient aircraft components as well as forged parts for petroleum and gas exploration (Bundesministerium für Wissenschaft, Forschung, und Wirtschaft, 2017, p. 25-26; voestalpine Stahl GmbH, 2016; 2017, p. 42–43).

Tungsten.—Wolfram Bergbau und Hütten AG, which was a subsidiary of Sandvik AB of Sweden, extracted about 515,000 t of tungsten ore at the Mittersill Mine in 2016 compared with about 536,000 t in 2015; the reduction in output was mainly owing to the low price of tungsten. The company produced 4,184 t of tungsten concentrate and recovered 1,203 t of WO₃ in tungsten concentrate in 2016, both of which were higher than in 2015. In 40 years of operation through 2016, Wolfram Bergbau und Hütten had extracted 15 Mt of ore and recovered 60,000 t of WO₃ in tungsten concentrate (Bundesministerium für Wissenschaft, Forschung, und Wirtschaft, 2017, p. 11, 26, 27).

Industrial Minerals

Lithium.—European Lithium Ltd., which owned the Wolfsberg lithium project in the State of Carinthia, held renewable exploration licenses through 2019. In November, the company reported a 75% increase in the Joint Ore Reserves Committee (JORC)-compliant resources at the Wolfsberg project, reporting measured resources of 2.86 Mt at a grade of 1.28% lithium oxide, indicated resources of 3.44 Mt at a grade of 1.08% lithium oxide, and inferred resources of 4.68 Mt at a grade of 0.78% lithium oxide. European Lithium began

¹Where necessary, values have been converted from euro area euros (EUR) to U.S. dollars (US\$) at an annual average exchange rate of EUR 0.94=US\$1.00 for 2016.

a prefeasibility study in the fourth quarter of 2016 that was expected to be completed in 2018. Construction was expected to begin in 2019, and lithium could be produced by 2020 (European Lithium Ltd., 2018, p. 7, 14, 21).

Magnesium Compounds.—Ten active mining sites (8 in the State of Styria, 1 in the State of Carinthia, and 1 in the State of Tyrol) produced about 566,000 t of magnesite in 2016. Veitsch-Radex GmbH & Co. OG, which was a subsidiary of RHI AG (a global supplier of high-grade refractory products) extracted about 470,000 t of raw magnesite from the Breitenau, Hochfilzen, and Radenthein Mines. Increased demand by steel producers led to increased capacity utilization at the company's Breitenau and Hochfilzen refractory product plants. Styromagnesit Steirische Magnesitindustrie GmbH, which was Austria's other leading magnesium producer, produced about 95,000 t of magnesite in 2016. About 41,100 t of ore was extracted from the Kaintaleck Mine; 29,100 t at the Wald Mine; 19,800 t at the Angerer Mine; and 5,000 t at the Hoehentauern Mine. The company's sales of caustic calcined magnesia reached a record high in 2016 (Bundesministerium für Wissenschaft, Forschung, und Wirtschaft, 2017, p. 30; RHI AG, 2017, p. 44–45).

Mineral Fuels

Natural Gas and Petroleum.—In 2016, Austria's natural gas extraction increased by 5.9% to 1.25 billion cubic meters. OMV Aktiengesellschaft produced 66.9% of the country's total natural gas output, and Rohöl-Aufsuchungs AG (RAG) produced the remaining 33.2%. In 2016, production of crude petroleum and natural gas liquids (NGLs) decreased by 10.7% to 752,420 t. Of the total crude petroleum output, 88.1% was extracted from the Wiener Becken in the State of Lower Austria, and 11.9% came from the Molasse zone in the States of Upper Austria and Salzburg. Almost all NGL output came from the Vienna basin. OMV provided about 86.8% of the total output, and RAG produced the remaining 13.2% (Fachverband der Mineralölindustrie Österreichs, 2017, p. 12–13).

Outlook

Austria is likely to remain a globally significant producer of magnesite and tungsten. Iron ore, magnesite, and tungsten production are likely to recover in 2017 with the recovery of global prices. Aluminum and steel production in the country are likely to increase as a result of ongoing capacity expansion. Austria may become a lithium producer in 2020 if the Wolfsberg project comes online as planned.

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 $\label{eq:table1} \textbf{TABLE 1} \\ \textbf{AUSTRIA: PRODUCTION OF MINERAL COMMODITIES}^1$

(Thousand metric tons, gross weight, unless otherwise specified)

Commodity ²	2012	2013	2014	2015	2016
METALS					
Aluminum metal, secondary metric tons	383,244	387,415	416,621	468,719 ^r	470,894
Copper:					
Refinery production, secondary	114	83	83	103	103
Smelter production, secondary	72 ^r	61 ^r	56 ^r	60 ^r	60
Ferroalloys, ferronickel, Ni content	800	800	1,000	1,200	1,200
Iron and steel:					
Pig iron	5,751	6,152	6,029	5,805	5,642
Crude steel	7,421	7,953	7,876	7,687	7,438
Products, semimanufactured, hot rolled	6,850	7,377	7,148	7,601 ^r	7,594
Iron ore, mine production, including					
micaceous iron oxide:					
Gross weight	2,142	2,323	2,437	2,783	2,777
Fe content	686	743	780	891	889
Lead, refinery production, secondary metric tons	24,500	24,971	25,136	24,399	24,000
Magnesite	779	714	754	703	566
Nickel, Ni content metric tons	1,700	2,100	4,100	2,700	3,200
Tungsten, mine production:					
Ore metric tons	376,460	487,310	499,883	535,762	515,172
Concentrate:					
Gross weight do.	2,760	3,514	3,500	3,879	4,184
WO ₃ content do.	890	1,072	1,000	1,086	1,203
W content do.	706	850	819	861	954
Zinc, unspecified do.	15,001	21,505	11,021	25,453	27,339
INDUSTRIAL MINERALS					
Cement:					
Clinker	3,206	3,150	3,200	3,200	3,200
Hydraulic	4,455	4,385	4,500 ^r	4,700 ^r	4,600
Clay and shale:					
Kaolin, crude metric tons	43,174	40,055	36,334	32,126	36,520
Other, bentonite, brick clay, and illite	1,739 ^r	1,736 ^r	1,808 ^r	1,923 ^r	1,736
Feldspar, mine production, byproduct of metric tons	32,000	35,000	35,000	35,000	35,000
silica processing					
Graphite, crude do.	219	200 ^e	150 e	150 e	150
Gypsum, including anhydrite, crude	792	635	730	715	674
Lime:					
Including quicklime	781	780 °	830 e	830 °	830
Marketable ^e	510	510	550	550	550
Nitrogen, N content, ammonia	395 ^r	358 ^r	442 ^r	428 ^r	431
Salt:					
Mine production, evaporated, mechanical heating process	958	1,115	1,154	1,100 e	1,100
Brine, gross weight thousand cubic meters	3,193	3,717	3,847	3,247 ^r	3,446
Rock metric tons	222	184	245	248	245
Stone, sand, and gravel:					
Sand and gravel, construction:					
Dolomite, loose rocks and gravel	2,661	2,709	2,990	2,902	3,071
Unspecified	23,980	24,271	25,717	26,389 ^r	26,032
Silica, mine production:	- /	, .	- ,	- /	-,
Quartz and quartzite, including pegmatite	315	311	370	319 ^r	388
Quartz sand Quartz sand	820	803	912	1,008 ^r	776
Stone, crushed:	020	803	714	1,000	//0
	1 145	1 100	1 200	1 117 f	1 210
Amphibolite	1,145	1,189	1,289	1,117 ^r	1,218
Basalt, not included in diabase	1,363	1,600	1,732	1,614 ^r	1,537
Diabase, of basaltic rocks	1,881	1,817	1,795	1,929 ^r	1,910

See footnotes at end of table.

TABLE 1—Continued AUSTRIA: PRODUCTION OF MINERAL COMMODITIES¹

(Thousand metric tons, gross weight, unless otherwise specified)

Commodity ²		2012	2013	2014	2015	2016
Stone, sand, and gravel:—Continued						
Stone, crushed:—Continued						
Dolomite		3,606	3,804	4,339	3,964 ^r	3,971
Gneiss		1,503	1,490	1,267	1,513 ^r	1,404
Granite, including granulite		2,704	2,667	2,989	2,797	2,890
Limestone, including marble		21,226	21,348	21,649	21,060 ^r	22,023
Marl		1,073	993	963	895	954
Serpentine		1,311	1,507	1,621	1,464	1,372
Other, including conglomerate and sandstone		31	22	17	16 ^r	18
Sulfur, S content, natural gas and	metric tons	10,329	9,789	8,280	8,502 ^r	8,000 e
petroleum, byproduct						
Tale, including leucophyllite, white mica	do.	135,665	134,814	131,108	122,326	123,040
MINERAL FUELS AND RELATED M	ATERIALS					
Coke, metallurgical		1,346	1,348	1,330	1,329	1,352
Natural gas liquids	thousand	830	720	645	611 ^r	590
	42-gallon barrels					
Natural gas, marketable, net	million cubic meters	1,729	1,359	1,245	1,183	1,253
Petroleum:	_					
Crude t	housand 42-gallon barrels	5,896	6,235	6,653	6,210 ^r	5,515
Refinery production: ³						
Bitumen, bituminous mixtures and	do.	2,220	1,890	1,900 ^r	1,760 ^r	2,020
other residues						
Diesel	do.	27,100	25,700	24,450	25,700 ^r	23,500
Distillate fuel oil	do.	6,050	6,790	5,610 ^r	7,010 ^r	5,600
Gasoline	do.	13,460	12,960	15,930 ^r	15,460 ^r	14,980
Kerosene, including jet fuel	do.	4,890	5,190	4,760 ^r	5,340 ^r	5,340
Liquefied petroleum gas	do.	830	830	740	1,450	1,500 e
Lubricants, inleuding miscellaneous oils	do.	450	520	360 ^r	290 ^r	520
Naphtha	do.	8,300	8,310	8,020	7,750 ^r	7,890
Refinery fuel, and losses	do.	750	770	3,220 ^r	3,180 °	2,880
Residual fuel oil	do.	4,110	4,950	4,540 ^r	4,280 °	5,100
Other, unspecified	do.	1,620	1,650	460 ^r	270 ^r	160
Total	do.		69,600			
Shale oil		69,800	· · · · · · · · · · · · · · · · · · ·	70,000 ^r	72,500 ^r 498	69,500 400 °
Shale oil eFetimeted Pavised do Ditto	42-gallon barrels	3,958	1,268	1,488	498	400 °

^eEstimated. ^rRevised. do. Ditto.

¹Table includes data available through February 22, 2018. All data are reported unless otherwise noted. Totals and estimated data are rounded to no more than three significant digits; may not add to totals shown.

²In addition to the commodities listed, aluminum oxide, electric furnace ferroalloys, iron oxide pigments, mica, and sodium compounds may have been produced in Austria, but available information was inadequate to make reliable estimates of output.

³Converted from metric tons to 42-gallon barrels.

$\label{eq:table 2} \textbf{AUSTRIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2016}$

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Alumina, fused	Treibacher Schleifmittel GmbH (Imerys S.A., 100%)	Plant at Villach, State of Carinthia	100
Aluminum, secondary	AMAG Austria Metall AG (B&C Industrieholding GmbH, 52.7%; RLB OÖ Alu Invest GmbH 16.5%; AMAG Employees Private Foundation, 11.1%; Treibacher Industrieholding GmbH, 8.2%; Esola Beteiligungsverwaltungs GmbH, 4.1%; free floating shares, 7.4%)	Ingot plant at Ranshofen, State of Upper Austria	312
Do.	Hammerer Aluminium Industries GmbH	Extrusion plant at Ranshofen, State of Upper Austria	75
Do.	Hydro Aluminium Nenzing GmbH (Norsk Hydro ASA, 100%)	Plant at Nenzing, State of Vorarlberg	59
Do.	Speedline Aluminium Giesserei GmbH (Swiss Alu Trading AG, 100%)	Plant at Schlins, State of Vorarlberg	49
Do.	Aluminum Lend GmbH (Salzburger Aluminium AG, 100%)	Ingot plant at Lend, State of Salzburg	40
Do.	NEUMAN Aluminium Austria GmbH (CAG Holding GmbH, 100%)	Plant at Marktl, State of Styria	16
Do.	Bavaria Industriekapital AG	Plant at Gleisdorf, State of Styria	NA
Do.	Georg Fischer Automotive AG	Plant at Altenmarkt, State of Salzburg; Plant at Herzogenburg, State of Lower Austria	NA
Do.	Nemak Linz GmbH (Tenedora Nemak S.A. de C.V., 100%)	Plant at Linz, State of Upper Austria	NA
Do.	Almaxal Brüder Tschirk GmbH	Plant at Neudörfl, State of Burgenland	NA
Do.	Almeta Metallumschmelzwerk GmbH	Plant at Vienna; Plant at Sollenau, State of Lower Austria	NA
Calcium carbonate, ground	Omya GmbH (Omya AG, 100%)	Plant at Gummern, State of Carinthia	2,500
Do.	do.	Plants at Golling, State of Salzburg; Neu Pirka, State of Styria; and Ulmerfeld-Hausmening, State of Lower Austria	NA
Cement	Lafarge Perlmooser AG (LafargeHolcim Ltd., 70%, and Strabag SE, 30%)	Plant at Mannersdorf, State of Lower Austria; plant at Retznei, State of Styria	1,600
Do.	Wietersdorfer & Peggauer Zementwerke GmbH (Knoch, Kern & Co. KG, 100%)	Plant at Peggau, State of Styria; Plant at Wietersdorf, State of Carinthia	1,100
Do.	Schretter & Cie Ltd.	Plant at Vils, State of Tyrol; grinding plant in Kirchbichl, State of Tyrol	830
Do.	Zementwerk LEUBE GmbH (LEUBE Baustoffe, 100%)	Plant at Gartenau, State of Salzburg	700
Do.	SPZ Zementwerk Eiberg KG (Rohrdorfer Gruppe, 100%)	Plant at Kufstein, State of Tyrol	600
Do.	Gmundner Zement Produktions- und Handels GmbH	Plant at Hatschek, State of Upper Austria	580
Do.	Kirchdorfer Zementwerk Hofmann GmbH	Plant at Kirchdorf, State of Upper Austria	550
Do.	Wopfinger Baustoffindustrie GmbH	Plant at Wopfing, State of Lower Austria	270
Chalk	Mühlendorfer Kreidefabrik Margit-Hoffman Ostenhof KG (Omya AG, 100%)	Plant at Müllendorf, State of Burgenland	NA
Clay, including brick clay	Wienerberger AG	Clay mines at Göllersdorf, State of Lower Austria; at Rotenturm and Stoob, State of Burgenland; and at Apfelberg and Weißkirchen, State of Styria	
Clay, kaolin, and silica sand	Österreichische Kaolin- und Montanindustrie AG	Mines at Weinzierl and Kriechbaum; processing plant at Aisthofen, State of Upper Austria	170
Copper, refined, secondary	Montanwerke Brixlegg AG (A-Tec Industries AG, 100%)	Plant at Brixlegg, State of Tyrol	120 e
Feldspar	Quarzwerke Österreich GmbH (Quarzwerke GmbH, 100%)	Mine and plant at St. Georgen an der Gusen, State of Upper Austria	NA
Ferroalloys, ferrovanadium, ferromolybdenum, ferronickel	Evonik Treibacher GmbH (Treibacher Industrie AG, 50%, and Evonik Industries, 50%)	Plant at Althofen, State of Carinthia	65 ^e

TABLE 2—Continued AUSTRIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2016

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity	
Graphite, natural	Graphitbergbau Mühldorf Mörth GmbH	Trandorf Mine at Weinberg and extended to Weinbergwald, State of Lower Austria; mine at Eichenwald, State of Styria		
Do.	Grafitbergbau Kaisersberg GmbH	Kaisersberg Mine, State of Styria	3	
Gypsum and anhydrite, natural	Moldan Baustoffe GmbH & Co. KG (Salzburger Sand- & Kieswerke GmbH, 100%)	Abtenau and Moosegg Mines, near Kuchl bei Hallein, State of Salzburg		
Do.	Saint-Gobain Rigips Austria GmbH (Compagnie de Saint-Gobain, 100%)	Mine at Grundlsee and main plant at Bad Aussee, State of Styria; Mine and plant at Puchberg, State of Lower Austria		
Do.	Knauf GmbH	Hinterstein Mine, Spital am Pyhrn, State of Upper Austria; Mines at Dörfelstein and Tragöß-Oberort, and plant at Weißenbach bei Liezen, State of Styria		
Do.	Gipswerk Schretter & Cie. GmbH	Mine at Weißenbach am Lech and plant at Vils, State of Tyrol	NA	
Iron ore	VA Erzberg GmbH (voestalpine AG, 100%)	Erzberg Mine at Eisenerz, State of Styria	3,000	
Iron oxide, micaceous	Kärntner Montanindustrie GmbH	Mine at Weißenbach am Lech and plant at Vils, State of Tyrol Erzberg Mine at Eisenerz, State of Styria Mine near Waldenstein, State of Carinthia Limestone mine near Kremsmauer mountain, and plant at Steyrling, State of Upper Austria Steinbruch plant, municipality of Gratkorn Limestone mine near Ofenauer Mountain in Golling and plant at Golling, State of Salzburg Limestone mine near Dürnbach in Walldeg, State of Lower Austria Mine and plant at Breitenau, State of Styria; Mine at Eichberg, State of Lower Austria; Hochfilzen Mine, area near Weissenstein, State of Tyrol;		
Lime	voestalpine Stahl GmbH (voestalpine AG, 100%)	•	1,200	
Do.	Kanzel Steinbruch Dennig GmbH (STRABEG SE, 100%)			
Do.	LEUBE Baustoffe GmbH			
Do.	Wopfinger Baustoffindustrie GmbH	Limestone mine near Dürnbach in Walldeg,	1,400	
Magnesite, crude	Veitsch-Radex GmbH & Co. OG (RHI AG, 100%)	at Eichberg, State of Lower Austria; Hochfilzen	800	
Do.	Styromagnesit Steirische Magnesitindustrie GmbH	Angerer, Kaintaleck and Wieser Mines, and plant near Oberdorf an der Laming, State of Styria; Hoehentauern Mine in Murtal, State of Styria Wald Mine in the Schoberpass, State of Styria	150	
Do.	Rohrdorfer Group	Mine and plant at Veitsch, State of Styria	NA	
Do.	PRONAT Steinbruch Preg GmbH (Schotter- und Betonwerk Karl Schwarzl Betriebsgesellschaft m.b.H., 100%)	Magnesite and dunite (olivine rock) mine at Gulsen, and plant at Preg, State of Styria		
Natural gas million cubic meters	OMV Aktiengesellschaft (Free floating shares, 43.3%; Österreichische Bundes und Industriebeteiligunge GmbH (Government), 31.5%; International Petroleum Investment Co., 24.9%; own shares, 0.3%)	Main fields in the Vienna Basin, State of Lower Austria, and some fields in the State of Upper Austria	1,100 °	
Do. do.	Rohöl-Aufsuchungs AG (EVN AG, 50.025%; Uniper Exploration & Production GmbH, 29.975%; Energie Steiermark Kunden GmbH, 10%; Salzburg AG, 10%)	Main fields in the State of Upper Austria, and some fields in the State of Lower Austria and the State of Salzburg		
Nitrogen, N content of ammonia	Borealis Agrolinz Melamine GmbH (Borealis AG, 100%)	Plant at Linz, State of Upper Austria	498	
Petroleum, crude thousand 42-gallon barrels	OMV Aktiengesellschaft (Free floating shares, 43.3%; Österreichische Bundes und Industriebeteiligunge GmbH (Government), 31.5%; International Petroleum Investment Co., 24.9%; own shares, 0.3%)	Main fields in the Vienna Basin, State of Lower Austria, and some fields in the State of Upper Austria	6,000 ^e	
Do. do.			900 °	

See footnotes at end of table.

TABLE 2—Continued AUSTRIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2016

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Petroleum, refined thousand	OMV Aktiengesellschaft (Free floating shares,	Schwechat refinery, City of Schwechat, State	70,400
products 42-gallon barrels	43.3%; Österreichische Bundes und Industriebeteiligung	• • • • • • • • • • • • • • • • • • • •	,
1 &	GmbH (Government), 31.5%; International Petroleum	,	
	Investment Co., 24.9%; own shares, 0.3%)		
Rare-earth elements	Treibacher Industrie AG	Plant at Althofen, State of Carinthia	NA
Salt, NaCl content	Salinen Austria AG	Mines at Bad Ischl and Hallstatt, and evaporite	1,100
Suit, Tues content	Summen Plasma Plo	saltworks at the Ebensee, State of Upper	1,100
		Austria; mine at Hallein-Dürrnberg, State of	
		Salzburg; mine at Hall in Tyrol, State of	
G.I. 1	T/ 11 O 1 1	Tyrol; mine at Altaussee, State of Styria	NIA
Silica sand	Krempelbauer-Quarzsandwerk	Burger and Knoll-Wizany Mines at Luftenberg,	NA
	St. Georgen Hentschläger & Co. KG.	Krempelbauer and Poscher Mines at St. Georgen,	
		and Treffling Mine at Aigen-Engerwitzdorf,	
		State of Upper Austria	
Do.	Quarzwerke Österreich GmbH	Mine and plant at Melk, State of Lower Austria;	NA
	(Quarzwerke GmbH, 100%)	mine and plant at St. Georgen an der Gusen,	
		State of Upper Austria	
Do.	Ouarzsande GmbH	Mine and plant at Eferding, mine at Bruck-Waasen,	NA
	(Zementwerk LEUBE GmbH, 100%)	and mine at Wolfsegg, State of Upper Austria	
Steel, crude	voestalpine Stahl GmbH (voestalpine AG, 100%)	Plant at Linz, State of Upper Austria	6,000
Do.	voestalpine Stahl Donawitz GmbH Co & KG	Plant at Donawitz (near Leoben), State of Styria	1,500
Во.	<u>.</u>	I failt at Dollawitz (fical Ecobell), State of Stylla	1,500
	(voestalpine AG, 100%)	Plant March 1 Co. March 1 Co. Co.	200
Do.	Breitenfeld Edelstahl AG	Plant at Mitterdorf im Mürztal, State of Styria	300
Do.	Böhler Edelstahl GmbH & Co KG	Plant at Kapfenberg, State of Styria	150 e
	(voestalpine AG, 100%)		
Stone, diabase, basalt	Diabaswerk Saalfelden GmbH (STRABAG SE, 100%)	Mine and plant at Saalfelden, State of Salzburg	NA
Do.	Klöcher Basaltwerke GmbH & Co KG	Mines and plants at Klöch and Oberhaag,	NA
	(ASAMER Holding AG, 100%)	State of Styria	
Talc and leucophyllite	Naintsch Mineralwerke GmbH	Talc mines at Lassing and Rabenwald, and plant	200 e
(white mica)	(Imerys S.A., 100%)	at Oberfeistritz, State of Styria; talc and mica	
,	•	mine at Kleinfeistritz, and a plant at	
		Weisskirchen, State of Styria	
Do.	Aspanger Bergbau und Mineralwerke	Leucophyllite mine and mica processing plant at	NA
Ъ0.			INA
	GmbH & Co. KG (Wietersdorfer & Peggauer	Aspangberg-Zöbern, State of Lower Austria	
	Zementwerke GmbH, 100%)		
Tungsten:			
Ore (scheelite), gross weight	Wolfram Bergbau und Hütten AG	Mine at Mittersill and processing plant at Bergla,	600 e
	(Sandvik AB, 100%)	in the Felbertauerntal, State of Salzburg	
Concentrate, W content metric	do.	do.	1,800 e
tons			
Carbide, powders do.	do.	Primary and secondary chemical treatment and	3,000 e
		sintering plant at St. Martin, in the Sulmtal,	
		State of Styria	
Do. do.	Treibacher Industrie AG	Plant at Althofen, State of Carinthia	NA
Metal, powders do.	Plansee SE (Plansee Holding AG, 100%)	Plants at Liezen, State of Styria, and at Reutte,	NA
		State of Tirole	. 12 1
Do. do.	Wolfram Bergbau und Hütten AG	Primary and secondary chemical treatment and	3,600 e
10. do.	•		3,000
	(Sandvik AB, 100%)	sintering plant at St. Martin, in the Sulmtal,	
		State of Styria	
Do. do.	Treibacher Industrie AG	Plant at Althofen, State of Carinthia	NA
Oxides do.			

^eEstimated; estimated data are rounded to no more than three significant digits. Do., do. Ditto. NA Not available.