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2020–2021 Minerals Yearbook

BELGIUM [ADVANCE RELEASE]

U.S. Department of the Interior
U.S. Geological Survey

April 2025

U.S. Geological Survey, Reston, Virginia: 2025

The Mineral Industry of Belgium

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Note: In this chapter, information for 2020 is followed by information for 2021.

The mineral industry of Belgium was largely dependent on trade and was engaged primarily in the manufacture and processing of metals and steel. Because there was no mining of metal ores in the country, raw materials for Belgium's metal-refining sector were sourced from imports or secondary scrap. In 2020, Belgium was the world's fourth-ranked producer of arsenic, the fifth-ranked producer of selenium (excluding United States production), and the sixth-ranked producer of indium. The country accounted for 6% of world selenium output, 2% of arsenic output, and 2% of indium output. Within the Europe and Central Eurasia region, Belgium was a significant processor of cobalt, primary and secondary copper, lead, pig iron, steel, and zinc. Belgium was an important import source of antimony, bismuth, gemstones, germanium, and mica for the United States. The city of Antwerp remained an important global trading center for diamonds (table 1; Safirova and others, 2019, p. 1.8–1.14; Antwerp World Diamond Centre, 2021; World Steel Association, 2021b, p. 9; Anderson, 2022a, b; George, 2022; Jasinski, 2022; Klochko, 2022; Merrill, 2022; Olson, 2022; Tolcin, 2022).

Minerals in the National Economy

The real gross domestic product (GDP) of Belgium decreased by 5.4% in 2020 compared with that in 2019; the nominal GDP was $459.8 billion[1] (EUR525.1 billion). In 2020, manufacturing output accounted for 12.4% of the GDP. The manufacturing of chemicals and chemical products made up 1.9% of the GDP; base metals and fabricated metal products (excluding machinery and equipment), 1.4%; and coke and refined petroleum products, 0.3%. The value added of the mining and quarrying sector accounted for 0.1% of the GDP; in 2020, the value of mining and quarrying output decreased by 2.9% compared with that in 2019. In 2020, the value added of the manufacturing sector decreased by 3.8%, and notable decreases in the value of output included those of coke and refined petroleum products, which decreased by 30.7% compared with that in 2019; transportation equipment, by 17.7%; and base metals and fabricated metal products (excluding machinery and equipment), by 8.7% (National Bank of Belgium, 2021, p. 16–17).

Government Policies and Programs

The policies for and the management of mineral resources are the responsibility of the three geographic regions of Belgium, with the exception of mineral resources on the continental shelf in the North Sea. There is no national mining law. The central Government of Belgium is responsible for the security of the energy supply and nuclear energy, whereas regional governments are responsible for overseeing the distribution of natural gas and electricity. In Flanders, the Flemish Parliament Act on Surface Mineral Resources forms the legislative framework for the Flemish Minerals Policy and defines the making of a general surface mineral resources plan and specific Surface Mineral Resource Summaries, which, in practice, apply to clay and sand. Flemish regulations on the environmental permit (VLAREM) form the legal basis for the environmental regulation of any activities that affect the environment and apply primarily to the extraction of sand and gravel and of brick clay. In Wallonia, the decree "Careers" of July 4, 2002, regarding environmental permitting and the Walloon Code of the town and country planning, urbanism, and heritage (CWATUPE) apply to quarry products. The Act on the Exploration and Exploitation of Nonliving Resources in the Territorial Sea and the Continental Shelf (formerly the "Continental Shelf Act") of June 13, 1969, governs the extraction of sand and gravel, including specifying concessions and royalties (European Union, 2020a, b; European Commission, 2021).

In December 2019, Belgium's National Climate Commission submitted the final National Energy and Plan 2021–2030 to the European Commission. The plan sets a target to reduce greenhouse gases from the energy sector by 40% from 2005 levels by 2030. Belgium planned to decommission an estimated 6,000 megawatts (MW), or all six of the country's nuclear plants, by 2025; these six plants were generating about one-half of the country's electricity. As of 2020, Belgium obtained 42% of its primary energy from petroleum; 28% from natural gas; 14% from nuclear power; 11% from renewables, and 5% from coal (European Commission, 2019, p. 11, 13; BP p.l.c., 2021, p. 11; World Nuclear Association, 2021).

Production

In 2020, Belgium's mineral production declined owing to decreased economic activity related to the coronavirus 2019 (COVID-19) pandemic. The production of mineral fuels from petroleum refining decreased significantly, including production of kerosene, which decreased by 61%; residual fuel oil, by 44%; gasoline, by 27%; distillate fuel oil, by 13%; and naphtha, including white spirit, by 10%. Notable decreases in the production of metals included those of refined lead (secondary), by 28%; pig iron, by 24%; hot-rolled steel products, by 23% (estimated); raw steel, by 21%; refined cobalt metal, by 13%; and primary refined copper, by 10%. Production of hydraulic cement was estimated to have decreased by 13%. Data on mineral production are in table 1.

[1]Where necessary, values have been converted from euro area euros (EUR) to U.S. dollars (US$) at the annual average exchange rates of EUR0.8455=US$1.00 for 2021, EUR0.8757=US$1.00 for 2020, and EUR0.8937=US$1.00 for 2019.

Structure of the Mineral Industry

The majority of the mining operations in Belgium were privately owned. Most mineral processing and mining companies were privately owned either by Belgian companies or companies based in other European Union (EU) member states. Table 2 is a list of major mineral industry facilities.

Mineral Trade

Belgium's trade of goods decreased in 2020 because of the COVID-19 pandemic and the resulting supply chain disruptions. In 2020, the country exported a total of $419.7 billion in goods, which was a decrease of 7.9% compared with that in 2019. In 2020, chemical products was the top-ranked export category; these exports accounted for 27.6% of total exports and increased in value by 2.8% compared with the value in 2019. Machinery and equipment accounted for 10.6% of total exports and decreased in value by 7.8% compared with that in 2019. Exports of mineral products made up 6.3% of total exports and decreased in value by 34.2% compared with that in 2019. Exports of base metals made up 7.1% of total exports and decreased in value by 13.4%, whereas exports of precious metals and gemstones accounted for 3.7% of the total and decreased in value by 16.2% (Belgian Foreign Trade Agency, 2021a, p. 23).

The country imported a total of $395.7 billion worth of goods and services, which was a decrease of 9.3% compared with that in 2019. In 2020, chemical products were the top-ranked import category and accounted for 24.6% of total imports; the value of these imports remained steady compared with that in 2019. Machinery and equipment accounted for 13.6% of total imports and decreased in value by 6.5% compared with that in 2019; mineral products accounted for 9.2% of total imports and decreased in value by 34.7%. Imports of base metals made up 6.6% of total imports and decreased in value by 11.8%, whereas imports of precious metals and gemstones accounted for 3.5% of total imports and decreased in value by 10.4% (Belgian Foreign Trade Agency, 2021a, p. 31).

In 2020, Belgium remained a leading exporter of multiple minerals and mineral products globally. The country was the world's leading exporter of master copper alloys (accounting for 31.3% of world exports), as well as zinc dust, powders, and flakes (25.9%), and dolomite (22.5%). Belgium was the second-ranked exporter of zinc bars, rods, and wires (accounting for a 19.8% share of the world's exports); nitric and sulfonitric acids (17%); and copper powders and flakes (11.6%). The country was the third-ranked exporter of flat-rolled products of stainless steel (10.1%); copper wire (7.3%); cobalt oxides and hydroxides (2.9%); and slag, dross, and scaling from the manufacture of iron and steel (8.5%). It was the fourth-ranked exporter of tin waste and scrap (7.4%); quicklime, slaked lime, and hydraulic lime (6.1%); aluminum tubes and pipes (4.7%); and copper matte and cement (4.3%). It was also the fourth-ranked exporter of diamond, with diamond exports valued at $8.2 billion in 2020. Belgium ranked 11th and 12th in global exports and imports, respectively, of raw steel (Belgian Foreign Trade Agency, 2021b, p. 2–10; World Steel Association, 2021a, p. 27).

In 2020, Belgium's top export partners were, in order of export value, Germany (which accounted for 18% of the country's total export value), France (14%), the Netherlands (12%), the United Kingdom (8%), and the United States (7%). The country's top import partners were, in order of import value, the Netherlands (which accounted for 18% of the country's total imports), Germany (14%), France (10%), the United States (7%), and China (5%) (Belgian Foreign Trade Agency, 2021a, p. 2–3).

Commodity Review

Metals

Cobalt.—In 2020, N.V. Umicore S.A. (Umicore) operated a cobalt and specialty materials plant at Olen where the company produced arsenic trioxide, cobalt and cobalt compounds, manganese compounds, and nickel compounds. The company recovered precious metals (gold, iridium, palladium, platinum, rhodium, ruthenium, and silver), minor metals (bismuth, indium, selenium, and tellurium), and base metals (antimony, copper, lead, nickel, and tin) in Hoboken. The company was one of the world's leading metal recyclers and processors. Umicore reported that demand for cobalt and nickel chemicals declined in 2020 because of the COVID-19 pandemic. Lower volumes of orders for materials resulted from reduced levels of activity from the downstream construction and industrial manufacturing sectors. Reduced demand for cobalt resulted in lower throughput volumes in refining and recycling activities. Umicore was estimated to have produced 1,300 metric tons (t) of refined cobalt in Olen in northern Belgium in 2020, which was a decrease of 13% compared with that in 2019. In July, the Antwerp-Hoboken plant underwent a 4-week planned maintenance shutdown. In 2019, the company completed the multiyear expansion program at the Antwerp-Hoboken plant. During the same year, Umicore signed a multiyear supply agreement with LG Chem Ltd. and Samsung SDI Co. Ltd., both of the Republic of Korea, to supply 125,000 t and 80,000 t, respectively, of lithium-nickel-cobalt-manganese oxide cathode materials; the companies began supplying the materials in 2020 (table 1; Thomson Reuters, 2020, p. 7; Umicore Group, 2020, p. 31, 35; 2021a, p. 33, 84; 2021b, c).

Copper, Lead, and Tin.—In 2020, the production of refined copper (primary) decreased by 21,600 t to 188,000 t. In May, Aurubis A.G. of Germany acquired a 100% interest in Metallo Group Holding N.V., the parent company of Metallo Belgium S.A., for $428 million (EUR375 million). The acquisition included the Beerse metal smelter, which had the capacity to produce a combined 196,000 metric tons per year (t/yr) of copper anodes and cathodes, lead ingots, and tin ingots. In the first quarter of 2020, the Aurubis Olen refinery, which had a production capacity of 340,000 t/yr, operated at one-half of capacity because of delays resulting from a crane incident in November 2019. Production of copper cathodes at the site decreased to 243,000 t in 2020, or by 28%, compared with production of 338,000 t in 2019. Copper scrap and metal-bearing recycling raw materials were sourced primarily from the European and North American markets (table 2; Aurubis A.G., 2020, p. 11, 13, 78, 80, 101–102, 201; Luk, 2020).

In 2020, the country's production of refined lead (secondary) decreased by 39,000 t to 101,000 t. Umicore reported a fire in the Antwerp-Hoboken lead refinery in March. In July, another

fire incident occurred on the roof of the wastewater treatment facility of the refinery. The company launched a multiyear investment program with the priority of fire prevention at the Antwerp-Hoboken production site (table 1, 2; Thomson Reuters, 2020, p. 6; Umicore Group, 2021a, p. 34, 210).

Iron and Steel.—In 2020, Belgium produced 6.1 million metric tons (Mt) of raw steel, which was a decrease from the 7.8 Mt produced in 2019. All output was continuously cast steel. About 68% of the raw steel output was produced by the oxygen process, and the remaining 32% was produced by electric arc furnace. For the third year in a row, exports of semifinished and finished steel declined, to 12.9 Mt in 2020 from 16.9 Mt in 2019, or by 24%; exports of semifinished and finished steel totaled 18.0 Mt and 18.1 Mt in 2018 and 2017, respectively. For the period 2017–20, exports of semifinished and finished steel decreased by 28%. The country accounted for 3.3% of global semifinished and finished steel exports (table 1; World Steel Association, 2021a, p. 3, 17, 49, 51).

In March 2020, ArcelorMittal S.A. of Luxembourg reduced its steel production and temporarily idled steel plants across Europe, including in Belgium, because of the onset of the COVID-19 pandemic. In August, the company began the relining of a blast furnace at Ghent, during which time the furnace remained on care-and-maintenance status. Also at the Ghent plant, the company invested $57 million in the "Torero" process for iron ore reduction using waste (recycled) carbon rather than fossil coal. Production was expected to start in reactor Number 1 in 2022 and in reactor Number 4 in 2024. ArcelorMittal also continued construction of the $188 million Carbalyst project at the production facility in Ghent. The "Steelanol" (steel plus ethanol) project, which was begun in 2018, would use a patented process from LanzaTech to convert carbon dioxide (CO_2) gas generated from steelmaking at the Ghent plant into ethanol. The project was expected to capture about 15% of the available waste gases and convert them into 80 million liters per year of ethanol. The project was expected to be completed in 2022 (table 2; Steelanol, 2018; ArcelorMittal S.A., 2021, p. 44, 74–75, 124–125).

Zinc.—Nyrstar N.V., a subsidiary of Trafigura Group Pte. Ltd. of the Netherlands (98.5% equity interest) and NN2 Newco Ltd. of the United Kingdom (1.5% equity interest), operated the Balen smelter and Overpelt casthouse, which had the capacity to produce 290,000 t/yr and 350,000 t/yr of zinc metal, respectively. In 2019, the company's operations at Balen and Overpelt were estimated to have produced 270,000 t of zinc metal. The two facilities, which were located 18 kilometers apart, were complementary and highly integrated. The Balen smelter produced zinc from zinc concentrates and recycled zinc secondary feed materials. Zinc cathodes produced at the Balen smelter and at Nyrstar's Auby smelter in France were transported to the centralized melting and casting facilities in Overpelt. In July, Nyrstar commissioned a zinc dust plant and zinc oxide hub at the Balen smelter. In August, the company opened a $1.8 million (EUR1.6 million) distribution hub for zinc oxides at the Overpelt site. The Overpelt site also included one of Europe's largest oxide washing facilities for the pretreatment of purchased secondary material, which it then supplied to Nyrstar's smelters in Europe. In November, the company commissioned a $6.9 million (EUR6 million) electrostatic precipitator at the Balen smelter, which allowed for the processing of a wider range of raw material inputs (table 2; Nyrstar N.V., 2020a-c, 2021a).

Industrial Minerals

Nitrogen.—In 2020, Belgium's ammonia production was estimated to have decreased by 2% compared with that in 2019. Yara Tertre S.A., which was a subsidiary of Yara Nederland B.V. of the Netherlands, produced nitrogen at the Tertre production site. The site had three plants—a nitrate plant with a production capacity of 1 million metric tons per year, a nitric acid plant with a capacity of 700,000 t/yr, and an ammonia plant with a capacity of 400,000 t/yr. The majority of the nitrate produced was exported to various European markets. The company sourced raw materials for fertilizer production, such as natural gas and electricity, through third-party offtake contracts. In 2020, Yara employed 541 workers in Belgium, of which 296 were employed at the Tertre production site (Yara International ASA, 2021a, p. 26, 52, 165; 2021b, p. 3).

MINERAL INDUSTRY HIGHLIGHTS IN 2021

Minerals in the National Economy

The real GDP of Belgium increased by 6.1% in 2021 compared with that in 2020; the nominal GDP was $594.1 billion[1] (EUR502.3 billion). In 2021, manufacturing output accounted for 12.3% of the GDP. The manufacturing of chemicals and chemical products made up 1.9% of the GDP; base metals and fabricated metal products (excluding machinery and equipment), 1.6%; and coke and refined petroleum products, 0.3%. In 2021, the value added of the manufacturing of coke and refined petroleum products increased by 74% after decreasing by 43.7% in 2020. The value added of the manufacturing of base metals and fabricated metal products (excluding machinery and equipment) increased by 33% compared with that in 2020, and that of chemicals and chemical products increased by 13.4%. The value added of the mining and quarrying sector accounted for 0.1% of the GDP; in 2021, the value added of mining and quarrying increased by 9.8% compared with that in 2020 (National Bank of Belgium, 2022, p. 16–17).

In 2021, Belgium's trade in goods increased as global trade recovered from the COVID-19 pandemic. In 2021, the country exported a total of $549.1 billion in goods, which was an increase of 25.6% compared with that in 2020. The country imported a total of $532.2 billion worth of goods and services, which was a decrease of 29.2% compared with that in 2020 (Belgian Foreign Trade Agency, 2022a, p. 17, 25).

In 2021, the country was the world's leading exporter of master copper alloys (accounting for 44% of world exports), as well as zinc dust, powders, and flakes (26.5%); zinc bars, rods, and profiles (25.9%); and dolomite (21.4%). Belgium was the second-ranked exporter of nitric acid and sulfonitric acids (accounting for a 20.9% share of the world's exports) and slag and other waste from the manufacture of iron and steel (8.1%).

The country was the third-ranked exporter of unwrought zinc (9.5%) and of slag, ash, and residues other than from the manufacture of iron and steel (9.2%); the fourth-ranked exporter of copper wire and cadmium and articles thereof (6.9% each); cobalt matte and other intermediates (6.4%); copper matte and cement (6.1%); flat-rolled iron and steel products (5.9%); quicklime (5.8%); aluminum tubes and pipes (5.8%); and cobalt oxides and hydroxides (3.1%). Belgium ranked fifth in the world in diamond exports, and its diamond exports were valued at $10.5 billion in 2021. Belgium ranked 11th in both global exports and imports of raw steel in 2021 (Belgian Foreign Trade Agency, 2022b, p. 3–13; World Steel Association, 2022, p. 27).

Production

In 2021, Belgium's mineral production increased owing to increased economic activity related to the initial recovery from the COVID-19 pandemic in 2020. The production of refined primary copper and secondary refined lead increased by 21% each; secondary refined copper, by 19%; pig iron, by 15%; raw steel, by 13%; and hot-rolled steel products and lime, by an estimated 13% each. Notable decreases in the production of metals included that of refined cobalt, which decreased by 23% compared with that in 2020. Production of nitrogen content of ammonia decreased by 20% (table 1).

Commodity Review

Metals

Zinc.—In January 2021, Trafigura announced an investment of $35.5 million (EUR30 million) to develop a 100-MW lithium-ion battery energy storage system at Nyrstar's Balen Zinc smelter. The project was to be developed by Nala Renewables Switzerland S.a.r.l. of Switzerland, which was an equal interest joint venture between Trafigura and IFM Investors of Australia; the new storage system was expected to be completed in 2022. In May, the company commissioned a new gas cleaning plant at the Budel smelter, which allowed the smelter to process a wider range of raw materials. In October, Nyrstar announced that it would be curtailing production at its Belgium facilities to one-half of capacity as rising energy prices had resulted in increased operating costs (Nyrstar N.V., 2021b-d).

Outlook

Belgium is likely to remain a leading secondary metal producer of precious and specialty metals and a major trading hub of diamond globally. The country is also expected to retain its significant role in international cargo handling of mineral commodities through its ports. The country's production of base metals, precious metals, and specialty metals, particularly cobalt and copper, is expected to return to the production levels of past years as industrial activity recovers from the economic slowdown caused by the COVID-19 pandemic. Risks to the continued recovery of the production of metal and chemical commodities include the availability of energy inputs, such as natural gas. Yara reported that prolonged increases to natural gas costs, without reciprocal price increases for its products or increased natural gas availability, could result in the temporary or permanent closures of production facilities. The country is expected to balance industrial input needs with the planned reduction in emissions from fossil fuels and nuclear energy as outlined in the National Energy and Plan 2021–2030. Although the country's trade slowed in recent years because of the COVID-19 pandemic, exports of chemicals, base metals, and other mineral commodities will likely continue to constitute a significant part of the country's trade in the coming years. Umicore's capacity expansion at Hoboken and the expected increases in global demand for minerals used in lithium-ion batteries will likely result in continued increased long-term production. The International Monetary Fund projects an increase of 2.4% in Belgium's real GDP in 2022 followed by an increase of 0.4% in 2023 (International Monetary Fund, 2022, p. 126; Yara International ASA, 2021a, p. 120).

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TABLE 1

BELGIUM: PRODUCTION OF MINERAL COMMODITIES[1]

(Metric tons, gross weight, unless otherwise specified)

Commodity[2]		2017	2018	2019	2020	2021
METALS						
Cobalt (refinery, metal powder, oxide, hydroxide) Co content[e]		1,590 [r]	1,650	1,500	1,300	1,000
Copper:						
Smelter, secondary		126,900	140,500	139,900	152,000	151,900
Refinery:						
Primary		235,500	230,800	209,600	188,000	227,900
Secondary		163,400	159,400	147,000	133,500	158,600
Indium, refinery, primary, In content[e]	kilograms	20,000	22,000	20,000	20,000	20,000
Iron and steel:						
Pig iron	thousand metric tons	4,849 [r]	4,754 [r]	4,818 [r]	3,647	4,180
Steel:						
Raw steel	do.	7,842	7,980	7,760 [r]	6,119	6,909
Products, hot rolled	do.	9,292	9,718 [r]	9,360 [r]	7,200 [e]	8,100 [e]
Lead, refinery, secondary		139,000 [r]	138,000 [r]	140,000 [r]	101,000	122,000
Selenium, Se content[e]	kilograms	200,000	200,000	200,000	200,000	200,000
Tin, smelter, secondary		9,700	9,330	9,300	9,000	9,800
Zinc, smelter, primary, slab		249,000	275,000	270,000 [e]	270,000 [e]	270,000 [e]
INDUSTRIAL MINERALS						
Arsenic trioxide[e]		1,000	1,000	1,000	1,000	1,000
Cement, hydraulic	thousand metric tons	7,314	7,546	7,857	6,820 [e]	7,400 [e]
Lime[3]		1,323,653	1,330,700	1,561,275	1,500,000 [e]	1,700,000 [e]
Nitrogen, ammonia, N content[e]		920,000	800,000	870,000	850,000	680,000
MINERAL FUELS AND RELATED MATERIALS						
Petroleum, refinery:						
Distillate fuel oil	thousand 42-gallon barrels	94,400 [r]	99,400 [r]	108,000 [r]	94,100	100,000 [e]
Gasoline	do.	37,400 [r]	32,600 [r]	34,500 [r]	25,300	27,000 [e]
Kerosene	do.	14,800 [r]	14,000 [r]	16,600 [r]	6,410	6,800 [e]
Liquefied petroleum gas	do.	7,870 [r]	8,840 [r]	11,400 [r]	11,100	12,000 [e]
Naphtha, including white spirit	do.	18,100 [r]	20,400 [r]	21,600 [r]	19,400	21,000 [e]
Residual fuel oil	do.	50,300 [r]	50,400 [r]	30,800 [r]	17,300	18,000 [e]
Total	do.	223,000 [r]	226,000 [r]	223,000 [r]	174,000	185,000

[e]Estimated. [r]Revised. do. Ditto.

[1]Table includes data available through November 7, 2022. 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.

[2]In addition to the commodities listed, antimony, secondary aluminum; bismuth metal; cadmium; gold; kaolin; lime, deadburned dolomite, and quicklime; manganese compounds; nickel; platinum-group metals; rhodium; ruthenium; sodium sulfate; sulfur; sulfuric acid; tellurium; and worked and natural stone may have been produced, but available information was inadequate to make reliable estimates of output.

[3]Includes hydraulic lime.

TABLE 2
BELGIUM: STRUCTURE OF THE MINERAL INDUSTRY IN 2021

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Arsenic trioxide		N.V. Umicore S.A.	Refinery at Olen	NA
Bismuth, metal, secondary		do.	Metals recycling plant at Antwerp-Hoboken	NA
Cadmium, metal	metric tons	do.	do.	1,800
Cement		Cimenteries CBR S.A. (HeidelbergCement Group, 100%)	Plants at Lixhe, Antoing, and Ghent	3,000
Do.		Holcim Belgique S.A. (LafargeHolcim Ltd., 100%)	Plants at Obourg and Antwerp	2,100
Do.		Compagnie des Ciments Belges-CCB S.A. (Aalborg Portland Holding S.A., 100%)	Plant at Gaurain-Ramecroix	1,800
Do.		VVM NV (CRH plc.)	Plants at Ghent and Antwerp	1,500
Cobalt, refined	metric tons	N.V. Umicore S.A.	Refinery at Olen	1,500 e
Copper, metal, primary and secondary		Aurubis Olen N.V. (Aurubis A.G., 100%)	do.	340
Do.		N.V. Umicore S.A.	Smelter at Antwerp-Hoboken	28
Copper, metal, secondary		Aurubis Beerse N.V. (Aurubis A.G., 100%)	Smelter at Beerse	160
Copper, other intermediate copper products		Nyrstar N.V. (Trafigura Group Pte. Ltd., 98.5%; NN2 Newco Ltd., 1.5%)	Smelter at Balen	NA
Dolomite		SA de Marche-les-Dames (Group Lhoist, 100%)	Quarries at Nameche	3,000
Do.		do.	Plant at Nameche	3,000
Do.		SA Dolomeuse (Group Lhoist, 100%)	Plant at Marche les Dames	750
Do.		do.	Quarry at Marche les Dames	500
Do.		SA Dolomies de Merlemont (Group Lhoist, 100%)	Quarry at Philippeville	100
Gold, metal	metric tons	N.V. Umicore S.A.	Smelter at Antwerp-Hoboken	100
Indium, crude indium hydroxide	do.	do.	Refinery at Antwerp-Hoboken	50
Lead, metal, secondary		do.	Smelter at Antwerp-Hoboken	200
Do.		do.	Refinery at Antwerp-Hoboken	125
Do.		Campine Recycling N.V.	Smelter at Beerse	45
Do.		Aurubis Beerse N.V. (Aurubis A.G., 100%)	do.	24
Do.		Accurec N.V.	Smelter at Tessenderic	15
Limestone		Carmeuse S.A. (HeidelbergCement Group, 100%)	Mines and plant at Engis	1,850
Do.		do.	Mines and plant at Maizeret	850
Do.		do.	Mines and plant at Moha	800
Do.		do.	Mines and plant at Frasnes	450
Do.		SA Transcar (Royal Volker Stevin, 100%)	Mines and plant at Maizeret	850
Nitrogen:				
Ammonia		BASF S.E.	Plant at Antwerp	650
Do.		Yara Tertre S.A. (Yara Nederland B.V., 100%)	Plant at Tertre	400
Nitric acid		do.	do.	700
Do.		N.V. Umicore S.A.	Plant at Antwerp-Hoboken	NA
Nitrates		EuroChem Antwerpen NV	Plant at Tertre	2,200
Do.		Yara Tertre S.A. (Yara Nederland B.V., 100%)	do.	1,000
Petroleum, refined	42-gallon barrels per day	Total Energies SE	Refinery at Antwerp	338,000
Do.	do.	ExxonMobil Petroleum & Chemical B.V.B.A. (Exxon Mobil Corp., 100%)	do.	307,000
Do.	do.	Belgian Refining Corp. (Gunvor Group, 100%)	do.	107,500
Do.	do.	ATPC (Vitol Group, 100%)	do.	24,000
Platinum-group metals	metric tons	N.V. Umicore S.A.	Smelter at Antwerp-Hoboken	55
Sand, silica		SRC-Sibelco N.V.	Mines and plants at Lommel, Mol, and Maasmechelen	500
Selenium	metric tons	N.V. Umicore S.A.	Refinery at Antwerp-Hoboken	600
Silver, metal	do.	do.	do.	2,400

See footnotes at end of table.

TABLE 2—Continued
BELGIUM: STRUCTURE OF THE MINERAL INDUSTRY IN 2021

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Steel:				
Raw		ArcelorMittal Liege (ArcelorMittal S.A., 100%)	Plant at Liege	3,000
Do.		do.	Plant at Ghent	3,000
Manufactured		NLMK La Louviere S.A. (NLMK Group, 100%)	Rolling mill at La Louviere	900
Do.		NMLK Clabecq S.A. (NLMK Group, 100%)	Rolling mill at Clabecq	750
Do.		Industeel Belgium S.A. (ArcelorMittal S.A., 100%)	Rolling mill at Charleroi	600
Do.		ArcelorMittal Gent (ArcelorMittal S.A., 100%)	Galvanizing Plant at Genk-Zuid	360
Do.		Tubemeuse Industries S.A.	Tube mill at Flemalle	50
Sulfuric acid		Nyrstar N.V. (Trafigura Group Pte. Ltd., 98.5%; NN2 Newco Ltd., 1.5%)	Smelter at Balen-Overpelt	350 [e]
Do.		N.V. Umicore S.A.	Smelter at Antwerp-Hoboken	165
Tellurium	metric tons	do.	Refinery at Antwerp-Hoboken	150
Tin, metal, secondary		Aurubis Beerse N.V. (Aurubis A.G., 100%)	Smelter at Beerse	12
Do.		N.V. Umicore S.A.	Refinery at Antwerp-Hoboken	NA
Zinc, metal		Nyrstar N.V. (Trafigura Group Pte. Ltd., 98.5%; NN2 Newco Ltd., 1.5%)	Casting facility at Balen-Overpelt	350
Do.		do.	Smelter at Balen-Overpelt	290

[e]Estimated. Do., do. Ditto. NA Not available.
[1]Includes secondary crude indium hydroxide.