

BELGIUM AND LUXEMBOURG

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BELGIUM

The mineral-processing industry was a significant contributor to the Belgian economy in 2001. The refining of copper, zinc, and minor metals and the production of steel, all from imported materials, were the largest mineral industries in Belgium. The extraction and recovery of nonferrous metals were carried out in large-scale, high-technology plants. Europe's largest electrolytic copper and zinc refineries were in Belgium as was one of the continent's largest lead refineries. The country was also a significant producer of cadmium, germanium, selenium, and tellurium as byproducts from smelting and refining operations.

Although the country is small, Belgium has a significant industrial minerals sector. The country was an important producer of such industrial materials as carbonates, which included limestone, dolomite, silica sand, and construction materials, which included a wide range of different types of marble.

Environmental programs and policy in Belgium were the responsibility of the Federal Ministry of the Environment as well as its comparable ministries in Flanders and Wallonia, which are two separate regions of the country. Environmental programs ranged from treating oil effluent to reducing air pollution emissions.

Belgium was a major exporting country with a highly developed market economy and, in 2000 (latest year for which data are available), was ranked as the 12th largest trading nation in the world in terms of exports and imports, each equivalent to about 75% of gross national product; this made the country one of the highest per capita exporters in the world. It has a long history of reliance on international trade. Most of Belgium's trade went to other member states of the European Union (80%) and the United States (8%) (U.S. Bureau of Economic and Business Affairs, 2002).

On May 1, 1998, Belgium became a member of the European Monetary Union. Belgium will shift from the use of the Belgian franc (BF) to the use of the euro (€) as its currency by January 1, 2002. On January 1, 1999, the definitive exchange rate between the BF and the € was established at BF 40.3399 to € 1.0000 (U.S. Bureau of Economic and Business Affairs, 2002).

Belgium, the Netherlands, and Luxembourg (BENELUX) form the BENELUX customs unit. Since 1921, the economic union between Belgium and Luxembourg, which is known as the Belgium-Luxembourg Economic Union (BLEU), has involved the parity of currency, integrated foreign trade (including statistics), a balance-of-payments account, and a joint central bank. International trade data for Belgium are covered in the context of the BLEU and, as such, also covered the exports, reexports, and imports of Luxembourg. Other members of the EU were the BLEU's most important trading partners.

Production of mineral commodities generally remained stable during 2001. As in the past, any increases in production

generally followed the lines of exported goods, such as value-added nonferrous metals (table 1).

Table 2 lists the principal mining and mineral-processing facilities in Belgium with their location and capacity. The only remaining active mining operations in Belgium in 2001 were for the production of sand and gravel and the quarrying of stone. Marble was an important export commodity. The metal-processing sector of the industry almost exclusively used imported raw materials, whether metal concentrates, scrap, or other materials, for smelting and refining or metal for forming and casting.

Belgium's Sudamin Holding purchased the antimony trioxide assets of French-based Mines de la Lucette. The deal will create a new company, Produits Chimique de la Lucette, and marks a move toward consolidation in the antimony trioxide industry. Campine S.A. thus became the only major European producer apart from the newly formed Produits Chimique. Lucette's magnesium hydroxide operation was excluded from the acquisition (Metal Bulletin, 2001c).

Umicore (formerly Union Minière) was one of the world leaders in the nonferrous metals sector. Umicore produced and marketed through its three business units: advanced materials, copper and precious metals, and zinc. Umicore's industrial activities covered smelting and refining, manufacturing, and recycling and provided base metals and semifinished products for other industries. Umicore's precious-metals facility recycled complex industrial intermediate materials and specific precious-metal-bearing scrap from catalyst, electronic, and photographic applications (Metal Bulletin, 2001a).

Umicore was to construct a copper leaching and electrowinning plant at its Hoboken operation that would boost copper refining capacity by 50,000 metric tons per year (t/yr). Combined copper refining capacity at Hoboken and Olen would be increased from 330,000 t/yr to 370,000 t/yr in 2003. All precious-metals-bearing blister copper produced at the precious-metal-recycling plant would be processed at Hoboken (Metal Bulletin, 2001d).

Sidmar NV was proceeding with the construction of the world's first industrial scale ironmaking plant that uses the Sidcomet process. The process, which was adapted from the Comet Resources Limited technology developed in Western Australia, reduces iron ore fines by using coal and fluxes in a rotary hearth furnace before being smelted in a separate electric arc furnace. Most other technologies require the use of more-expensive pellet and lump grades of iron ore; the use of ordinary coal gives the process a cost advantage over the blast furnace. Depending on the temperature employed in the reduction process, Sidcomet can produce as much as 50 metric tons of hot metal in 28 minutes. The 800,000-t/yr plant will help provide the hot metal required for Sidmar to meet its 6-million-metric-ton-per-year (Mt/yr) hot-rolling capacity (Metal Bulletin, 2001b).

According to the Diamond High Council, Belgium's total diamond turnover in 2000 (latest year for which data are available) grew by nearly 9% to a record \$25.8 billion compared with nearly \$24 billion in 1999. This included a 16% increase in polished sales overseas from \$5.2 billion to \$6.1 billion in 2000. There was a slight rise in exports to the United States, which remained the main destination, by taking almost 40% of Belgium's goods (Basel Magazine, 2001).

Belgium, which has been an important producer of marble for more than 2,000 years, was recognized for the diversity and quality of its dimension stone. The so-called petit granit, which is actually a dark blue-gray crinoidal limestone, was one of the most important facing stones the country produces. All the marble quarries are in Wallonia. Red, black, and gray are the principal color ranges of the marble, most of which was exported.

Zoutman Industries (formerly Eurasalt NV) started a new plant at Roeselare. The 200,000 t/yr plant produced all grades of sea salt for use in technical applications, human consumption, animal feed, and deicing. Zoutman, which was an independent salt producer, had production sites in Belgium, Poland, and South America (Zoutman Industries, April 2001¹).

When the last Belgian coal mines closed in 1992, the country became entirely dependent on imported primary energy. Belgium imported coal to meet the needs of the steel, cement, and power-generating industries and imported all its crude oil for its four petroleum refineries. Belgium's seven nuclear powerplants supplied more than one-half of its electricity needs. Natural gas, which was considered to be more environmentally acceptable as a fuel, has begun to play a more important role as an energy source. With Belgium at the center of the European gas grid, the country was favorably located for obtaining natural gas.

The seaport of Antwerp is an important link in the chain of international trade. Every year Antwerp's port operators handle almost 120 million metric tons of international maritime goods traffic. This makes Antwerp the fourth largest port in the world, the second largest port in Europe, and by far the largest port in Belgium. The port covers more than 14,055 hectares of land with 130 kilometers of berths, about one-half of which are suitable for deep draft ships. Antwerp is Europe's leading port for steel products. Bulk terminals, with specialized facilities, handle large volumes of china clay (kaolin), coal, fertilizers, iron ore, nonferrous ores, and quartz sand (Antwerp Port Authority, 2001[§]).

Corporate restructuring and the Government policy of budget cuts, which were split between the Federal Government and the regional authorities of Flanders and Wallonia, were expected to make Belgian products more competitive in the world market. The export-oriented Belgian industries relied heavily on the markets of its trading partners; when these partners' profits and cash flow increase, Belgium's economy will also experience positive results because it will be able to export more of its products.

¹References that include a section twist (§) are found in the Internet References Cited section.

LUXEMBOURG

In 2001, Luxembourg's mineral industry consisted principally of raw materials processing, information systems, and mineral trading.

As a member of the BLEU, trade statistics for Luxembourg are inextricably linked with those of Belgium and, therefore, cannot be listed individually. The iron and steel industry was Luxembourg's most important mineral industry sector; steel was the country's main export commodity.

Acieries Reunies de Burbach-Eich-Dudelang (ARBED) dominated the mineral industry and was the major producer of pig iron, crude steel, and stainless steel, all from imported material. The company specialized in the production of large architectural steel beams. The company was also involved in other areas of the economy, such as the cement and brickmaking industries. ARBED's domestic and foreign subsidiaries had interests in cement, copper foil production, engineering, mining, and in steelmaking and steel products.

Mining in Luxembourg was represented by small industrial mineral operations that produced material for domestic consumption. These minerals include dolomite, limestone, sand and gravel, and slate (table 1). Luxembourg's principal producers of mineral industry products are listed in table 2.

References Cited

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- Antwerp Port Authority, 2001, Antwerp is a European main port, accessed February 11, 2002, at URL <http://www.portofantwerp.b/index.htm>.
Zoutman Industries, 2001 (April 3), Eurasalt changes name to Zoutman Industries, accessed July 9, 2001, at URL <http://www.zoutman.com/en/indexen.htm>.

Major Sources of Information

- Institute National de Statistiques
Rue de Louvain 44
1000 Brussels, Belgium
Service Geologique de Belgique
Rue Jenner 13
1040 Brussels, Belgium
Service Central de la Statistique et des Études Economiques (STATEC)
6 Boulevard Royal
2013 Luxembourg

TABLE 1
BELGIUM AND LUXEMBOURG: PRODUCTION OF MINERAL COMMODITIES 1/

(Metric tons unless otherwise specified)

Country and commodity	1997	1998	1999	2000	2001 e/
BELGIUM 2/					
METALS					
Aluminum, secondary including unspecified metals e/	2,000	1,000	1,000	1,000	500
Arsenic, white e/	2,000	1,500	1,500	1,500	1,500
Bismuth, metal e/	800	700	700	700	700
Cadmium, primary	1,420	1,318	1,400 e/	1,148 r/	1,236 3/
Cobalt, primary e/	1,200	1,200	950	1,148 r/ 3/	1,200
Copper:					
Blister: e/					
Primary	2,000	--	--	--	--
Secondary	141,000	138,000	143,300 3/	144,700 r/ 3/	139,000 3/
Total	143,000	138,000	143,300 3/	144,700 r/ 3/	139,000 3/
Unwrought, total primary and secondary including alloys	467,494	482,992	485,000 e/	485,000 e/	475,000
Refined, primary and secondary including alloys	373,000	368,000	388,000 e/	423,100	425,000
Iron and steel:					
Pig iron	8,077	8,619	8,431	8,472	8,500
Ferroalloys, electric furnace, ferromanganese e/	25,000	20,000	-- r/	-- r/	--
Steel:					
Crude	10,738	11,617	10,931	11,635	12,000
Hot-rolled products	12,047	12,195	12,780	13,689	14,000
Lead, refined:					
Primary e/ 4/	84,400	74,300	82,900 3/	98,000	80,000
Secondary 5/	26,400	17,200	20,300	20,000	16,000
Total e/	111,000	91,500	103,200 3/	118,000	96,000
Selenium e/	250	200	200	200	200
Tin, metal, secondary including alloys e/	3,000	2,500	8,100	8,500	8,000
Zinc:					
Slab:					
Primary	213,600	205,000	230,500	224,000	230,000
Secondary (possibly remelted zinc) e/	30,000	30,000	28,000	28,000	30,000
Total e/	243,600 3/	235,000	259,000	252,000	260,000
Powder	36,000	30,000	30,000 e/	30,000 e/	25,000
INDUSTRIAL MINERALS					
Barite e/	30,000	40,000	30,000	30,000	30,000
Cement, hydraulic e/	8,052 3/	8,000	8,000	8,000	8,000
thousand tons					
Clay, kaolin e/	300	300	300	300	300
do.					
Lime and dead-burned dolomite, quicklime e/	1,750	1,750	1,750	1,750	1,700
do.					
Nitrogen, N content of ammonia	750 e/	756	850 e/	863	860
do.					
Sodium sulfate e/	250	250	250	250	250
do.					
Stone, sand and gravel: e/					
Calcerous:					
Alabaster	1,151 3/	1,200	1,200	1,200	1,200
Dolomite	3,466 3/	3,500	3,500	3,500	3,500
thousand tons					
Limestone	30,000	30,000	30,000	30,000	30,000
do.					
Marble, in blocks	300	300	300	300	300
Marble, crushed and other	100	100	100	100	100
cubic meters					
Petit granite (Belgian bluestone):					
Quarried	1,200	1,200	1,200	1,200	1,200
thousand cubic meters					
Sawed	100,000	100,000	100,000	100,000	100,000
do.					
Worked	15,000	15,000	15,000	15,000	15,000
do.					
Crushed and other	800,000	800,000	800,000	800,000	800,000
do.					
Porphyry, all types	4,000	4,000	4,000	4,000	4,000
thousand tons					
Quartz and quartzite	500,000	500,000	500,000	500,000	500,000
do.					
Sandstone:					
Rough stone including crushed	2,400	2,400	2,400	2,400	2,400
thousand tons					
Paving	14,000	14,000	14,000	14,000	14,000
do.					
Sand and gravel:					
Construction sand	9,000	8,500	8,500	8,500	8,500
thousand tons					
Foundry sand	500,000	500,000	500,000	500,000	500,000
do.					
Dredged sand	2,300	2,000	2,000	2,000	2,000
thousand tons					
Glass sand	1,900	1,800	1,800	1,800	1,800
do.					
Other sand	2,800	2,800	2,800	2,800	2,800
do.					
Gravel, dredged	5,000	5,000	5,000	5,000	5,000
do.					

See footnotes at end of table.

TABLE 1--Continued
 BELGIUM AND LUXEMBOURG: PRODUCTION OF MINERAL COMMODITIES 1/

(Metric tons unless otherwise specified)

Country and commodity	1997	1998	1999	2000	2001 e/
BELGIUM--Continued 2/					
INDUSTRIAL MINERALS--Continued					
Sulfur: e/					
Byproducts:					
Elemental	250,000	248,000	228,000	230,000 3/	230,000
Other forms	180,000	180,000	180,000	180,000 3/	180,000
Total	430,000	428,000	408,000	410,000 3/	410,000
Sulfuric acid, byproduct of petroleum	2,000	2,000	2,000	2,000	2,000
MINERAL FUELS AND RELATED MATERIALS					
Carbon black e/	1,500	1,000	1,000	1,000	1,000
Coke, all types e/	3,401 3/	3,400	3,400	3,400	3,400
Gas, manufactured e/	372,095 3/	375,000	375,000	375,000	375,000
Petroleum refinery products:					
Liquefied petroleum gas	13,607	7,401 r/	6,113 r/	8,758 r/	9,000
Naphtha and white spirit	13,354	12,954 r/	13,656 r/	17,213 r/	16,000
Gasoline	57,979	54,672 r/	51,281 r/	45,152 r/	50,000
Jet fuel	16,000 r/ e/	17,536 r/	16,952 r/	18,544 r/	18,000
Distillate fuel oil	85,000 e/	92,698 r/	87,483 r/	93,086 r/	90,000
Refinery gas e/	3,500	3,500	3,500	3,500	3,500
Residual fuel oil	51,244	49,384 r/	41,998 r/	49,557 r/	50,000
Bitumen e/	5,766 3/	5,000	5,000	5,000	5,000
Other e/	8,500	8,500	8,500	8,500	10,000
Refinery fuel and losses e/	12,000	12,000	12,000	12,000	10,000
Total e/	267,000 r/	264,000 r/	246,000 r/	261,000 r/	262,000
LUXEMBOURG 6/					
METALS					
Iron and steel, metal:					
Pig iron	437,000	--	--	--	--
Steel:					
Crude	2,580,000	2,478,000	2,427,000	2,571,000	2,570,000
Semimanufactures	2,466,000	2,517,000	2,775,000	3,019,000	3,020,000
INDUSTRIAL MINERALS					
Cement, hydraulic e/	650,000	650,000	600,000	600,000	600,000
Gypsum and anhydrite, crude e/	400	400	400	400	400
Phosphates, Thomas slag: e/					
Gross weight	500,000	475,000	475,000	475,000	475,000
P ₂ O ₅ content	75,000	70,000	70,000	70,000	70,000

e/ Estimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. r/ Revised. -- Zero.

1/ Table includes data available through February 2002.

2/ In addition to commodities listed, Belgium produced a number of other metals and alloys, for which only aggregate output figures were available.

3/ Reported figure.

4/ Data not reported; derived by taking reported total lead output plus exports of lead bullion less imports of lead bullion.

5/ Data represent secondary refined lead output less remelted lead. As such, the figures are probably high because they include some lead that was sufficiently pure as scrap that did not require remelting, but data are not adequate to permit differentiation.

6/ Construction materials such as dimension stone and sand and gravel are also produced, but the amounts are no longer reported and no basis exists for the formulation of reliable estimates of output levels.

TABLE 2
BELGIUM AND LUXEMBOURG: STRUCTURE OF THE MINERAL INDUSTRY IN 2001

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
BELGIUM				
Cadmium, metal	metric tons	Umicore (Sté. Générale de Belgique, 50.2%)	Balen	1,800
Cement		Cimenteries CBR SA (Sté. Générale de Belgique)	Plants at Lixhe, Mons/Obourg, Harmignies, Marchienne, Ghent, and others	3,200
Do.		Ciments d'Obourg SA	Plants at Obourg and Thieu	2,800 1/
Do.		Compagnie des Ciment Belge (Ciments Français)	Plant at Gaurain-Ramecroix	2,400
Total				8,400
Cobalt	metric tons	Umicore (Sté. Générale de Belgique, 50.2%)	Refinery at Olen	500
Copper		do.	Smelter at Antwerp-Hoboken	50
Do.		do.	Refinery at Olen	330
Do.		Metallo-Chimique NV	Smelter at Beerse	80
Dolomite		SA Dolomeuse (Group Lhoist)	Quarry at Marche les Dames	500
Do.		do.	Plant at Marche les Dames	750
Do.		SA de Marche-les-Dames (Group Lhoist)	Quarries at Namèche	3,000
Do.		do.	Plant at Namèche	3,000
Do.		SA Dolomies de Merlemont (Group Lhoist)	Quarry at Philippeville	100
Lead, metal		Umicore (Sté. Générale de Belgique, 50.2%)	Smelter at Antwerp-Hoboken	90
Do.		do.	Refinery at Antwerp-Hoboken	125
Limestone		Carmeuse S.A. (Long View Investment NV)	Mines and plant at Engis	1,850
Do.		do.	Mines and plant at Frasnes	450
Do.		do.	Mines and plant at Maizeret	850
Do.		do.	Mines and plant at Moha	800
Do.		SA Transcar (Royal Volker Stevin)	Mines and plant at Maizeret	850
Petroleum, refined	42-gallon barrels per day	Fina Raffinaderji Antwerp	Refinery at Antwerp	268,000
Do.	do.	SA Esso NV	do.	239,000
Do.	do.	Belgian Refining Corp.	do.	80,000
Do.	do.	Nynas Petroleum NV	do.	125,000
Total				712,000
Salt		Zoutman NV	Plant at Roeselare	200
Steel		Cockerill Sambre SA (Government of Wallonia, 80%)	Plants at Liège and Charleroi	5,000
Do.		Sidmar NV [Belgian Government 28.24%; Acieries Reunies de Burbach-Eich-Dudelange (ARBED), 71.76%]	Plant at Ghent	3,960
Do.		Usines Gustave Boël NV	Plant at La Louviere	2,020
Do.		Forges de Clabecq SA	Plant at Clabecq	1,500
Do.		SA Fabrique de Fer de Charleroi	Plant at Charleroi	600
Do.		ALZ NV	Plant at Genk-Zuid	360
Do.		New Tubemeuse (NTW) SA	Plant at Flemalle	300
Total				14,000
Zinc, metal		Umicore (Sté. Générale de Belgique, 50.2%)	Smelter and refinery at Balen	450
LUXEMBOURG				
Cement		SA des Ciments Luxembourgeois (ARBED, 50%; SGB, 25%)	Plant at Esch-sur-Alzette	450
Do.		Intermoselle SARL (ARBED, 33%)	Plant at Rumelange	1,000
Steel		Acieries Reunies de Burbach-Eich-Dudelange (ARBED) (Belgian Government, 31%; others)	Plants at Differdange, Dudelange, Esch-Belval, Esch-Schiffange	5,320

1/ Includes the capacity of the company SA Ciments de Haccourt.