

# THE MINERAL INDUSTRIES OF BELGIUM AND LUXEMBOURG

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## Belgium

The mineral-processing industry was a significant contributor to the Belgian economy in 1999. 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 four groups of industrial materials—carbonates, which included limestone, dolomite, and whiting; synthetic materials in the form of soda ash and sodium sulfate; silica sand; and construction materials, which included a wide range of different types of marble.

Environmental policy in Belgium was 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. Individual companies were responsible for environmental protection in their own areas of concern and contributed to environmental investment programs. These environmental programs ranged from treating oil effluent to reducing air emissions.

Belgium was a major exporting country and was the 11th largest trading nation in the world, with exports and imports each equivalent to about 70% of gross national product, thus making it one of the highest per capita exporters in the world. It has a long history of reliance on international trade. Three-quarters of Belgium's trade were with other members of the European Union (EU) members (U.S. Embassy, Brussels, July 1999, FY 2000 country commercial guides—Belgium—Economic trends and outlook—Major trends and outlook, accessed July 19, 2000, at URL [http://www.state.gov/www/about\\_state/...ides/2000/europe/belgium00\\_02.html](http://www.state.gov/www/about_state/...ides/2000/europe/belgium00_02.html)).

On May 1, 1998, Belgium became a member of the European Monetary Union. Belgium will gradually 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 exchange rate between the BF and the Euro was established at BF 40.3399 to Euro 1.0000 (U.S. Department of State, July 1999, FY2000: Belgium Country Commercial Guide, accessed July 19, 2000, at URL [http://www.state.gov/www/about\\_sta...ides/2000/europe/belgium00\\_02.html](http://www.state.gov/www/about_sta...ides/2000/europe/belgium00_02.html)).

Belgium, the Netherlands, and Luxembourg (BENELUX) form the BENELUX customs unit. Since 1921, close 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, 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 or increased somewhat during 1999. As in the past, 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 mining operations left in Belgium in 1999 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.

Union Minière (UM) completed construction of a new copper, lead, and nickel smelter and a new precious-metal refinery at its Hoboken complex. This not only increased Hoboken's unit capacity and reduced production costs, it reduced the amount of time that material is in the process stream and was expected to reduce environmental problems. After experiencing startup difficulties for almost a year, the smelter started operating at nominal capacity in 1999. The smelter used proprietary Isasmelt technology for treating copper-bearing materials. In this process, the copper is separated from the lead, which then goes to the blast furnace as slag along with lead-rich feeds. Also, UM was spending about \$9 million at its copper refinery at Olen to enable the facility to treat blister copper from Hoboken (Metal Bulletin, 1999c).

UM's precious metals facility recycled complex industrial intermediate materials and specific precious-metal-bearing scrap from electronic, photography, and catalyst applications.

Usinor Group of France secured an agreement from the Wallonia region government agency to buy a 53.77% share of Cockerill Sambre SA, which was the largest steel producer in Belgium. The agreement was subject to two conditions—the approval of EU antitrust authorities and the acquisition by Cockerill of the remaining 40% of Eko Stahl AG, which was its German subsidiary. In January 1999, the European Commission raised antitrust concerns. Usinor would be required to sell some of its service centers and to scale back its profiling business. The Commission's objections referred solely to activities in France, not Belgium. The Government of Wallonia will retain a 25% stake in Cockerill (Metal Bulletin, 1999b).

Sidmar NV was installing two more hot-dip galvanizing lines at its Ghent steel works. The first line will have a capacity of 400,000 metric tons per year (t/yr), and the second line will have a capacity of 240,000 t/yr. The lines would be built

adjoining the works' existing cold-rolling shop and were scheduled to be commissioned by the end of 2000. The project was the latest in a series of expansion plans by the Acieries Reunies de Burbach to other EU countries, thereby reducing its trade deficit, were Eich-Dudelang (ARBED) affiliates in the production of galvanized sheet. Sidmar and Hoogovens IJmuiden were also proceeding with plans to install a second line (Galtec 2) at Hoogovens' steelworks in the Netherlands (Metal Bulletin, February 4, 1999, Sidmar plans another big galv expansion, accessed March 1, 1999, at URL <http://www.metalnet.co.uk/cgi2/W3Vlibrary/MO=3/CT=D/RI=00004280>).

The government of the Walloon region was considering taking a stake in Hoogovens UGB, which entered into creditor protection at the end of 1998. Negotiations between the current (1999) owners, creditors, and bankers were continuing, although there was speculation that the company will shut down its electric arc furnaces (Metal Bulletin, 1999d).

The Diamond High Council (DHC), which was based in Antwerp, announced that diamond sales in Belgium dropped by 12% to \$15.4 billion in 1999. The DHC attributed the sale slowdown to the malaise on the world market, and noted that the diamond trade does not remain unaffected by global economic problems. Although sales decreased, the weight of diamonds changing hands increased by 6% to 397 million carats. Rough diamond exports from Russia have declined dramatically since 1997, and the DHC no longer regarded the country as one of its main suppliers. Russia apparently redirected its exports (Mining Journal, 1999).

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 is exported.

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 of its crude oil for its four petroleum refineries. Belgium's seven nuclear powerplants supplied more than 60% 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.

Corporate restructuring and budget cuts by governments, split between the Federal Government and the regional authorities of Flanders and Wallonia, were expected to make Belgian products more competitive on 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.

## Luxembourg

In 1999, 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, with steel being the country's main export commodity.

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. Also, the company was involved in other areas of the economy, such as the cement and brickmaking industries. ARBED's domestic and foreign subsidiaries had interests in steel making and steel products, cement, copper foil production, engineering, and mining.

ARBED was buying out the Flemish Government's 27.8% stake in Sidmar to give it almost complete control of the Belgium flat rolled steel producer. The company stated that the move was in accordance with its desire to simplify its shareholder structure (Metal Bulletin, 1999a).

Mining in Luxembourg was represented by small industrial mineral operations that produce material for domestic consumption. These minerals include dolomite, limestone, sand and gravel, and slate (table 3). Luxembourg's principal producers of mineral industry products are listed in table 4.

## References Cited

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———1999b, Commission raises anti-trust concerns over Usinor-Cockerill. Metal Bulletin, no. 8344, January 21, p. 17.  
———1999c, Hoboken refinery emerges from commissioning ordeal. Metal Bulletin, no. 8387, June 24, p. 8.  
———1999d, State may take a stake in Hoogovens UGB. Metal Bulletin, no. 8349, February 8, p. 17.  
Mining Journal, 1999, Belgian diamond sales slow: Mining Journal [London], v. 332, no. 8516, January 29, p. 58.

## Major Sources of Information

Institute National de Statistiques  
Rue de Louvain 44  
1000 Brussels, Belgium  
Ministère des Affaires Économiques  
NG III Blvd. E. Jacqmaain, 154  
1000 Brussels, Belgium  
Service Géologique de Belgique  
Rue Jenner 13  
1040 Brussels, Belgium  
Service Central de la Statistique et des Etudes Economiques  
(STATEC)  
6, boulevard Royal  
2013 Luxembourg

TABLE 1  
BELGIUM: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodity 3/	1995	1996	1997	1998	1999 e/
<b>METALS</b>					
Aluminum, secondary including unspecified metals e/	4,000	3,000	2,000	1,000	1,000
Arsenic, white e/	2,000	2,000	2,000	1,500	1,500
Bismuth metal e/	900	800	800	700	700
Cadmium, primary	1,710	1,580 e/	1,420	1,318 4/	1,400
Cobalt, primary e/	1,000	1,000	1,200	1,200	1,200
Copper:					
Blister: e/					
Primary	1,000	3,500	2,000	--	
Secondary	146,000	153,800	140,500	138,400 r/	139,300
Total	147,000	157,300	142,500	138,400 r/	139,300 4/
Unwrought, total primary and secondary including alloys	465,000 e/	425,703	467,494	482,992 r/	485,000
Refined, primary and secondary, including alloys	376,000	386,000 r/	373,000 r/	368,000 r/	400,000
Iron and steel:					
Pig iron thousand tons	9,199	8,628	8,077	8,730	8,800
Ferrous alloys, electric furnace, ferromanganese e/	25,000	25,000	25,000	20,000	20,000
Steel:					
Crude thousand tons	11,606	10,773	10,738	11,617	11,500
Hot-rolled products do.	11,540	10,963	12,047	12,000 e/	12,000
Lead, refined:					
Primary e/ 5/	95,300	89,800 r/	84,400	74,300 r/	82,900 4/
Secondary 6/	26,400 e/	31,000 e/	26,400	17,200 r/	20,300 4/
Total e/	122,000 r/	121,000 r/	111,000 r/	91,500 r/	103,200 4/
Selenium e/	250	250	250	200	200
Tin metal, secondary including alloys e/	5,000	3,000	3,000	2,500	2,500
Zinc:					
Powder	36,000	36,000	36,000	30,000	30,000
Slab:					
Primary	211,100	207,400 e/	213,600	205,000 r/	230,500 4/
Secondary (possibly remelted zinc) e/	29,000	27,000	30,000	30,000	28,000
Total e/	240,000 r/	234,000 r/	244,000 r/	235,000 r/	259,000
<b>INDUSTRIAL MINERALS</b>					
Barite e/	30,000	30,000	30,000	40,000	30,000
Cement, hydraulic thousand tons	8,223 r/	7,857 r/	8,052 r/	8,000 r/ e/	8,000
Clays, kaolin e/ do.	300	300	300	300	300
Lime and dead-burned dolomite, quicklime e/ do.	1,800	1,800	1,750	1,750	1,750
Nitrogen, N content of ammonia e/ do.	720	750	750	750	750
Sodium sulfate e/ do.	250	250	250	250	250
Stone, sand, and gravel: e/					
Calcareous:					
Alabaster	1,167 4/	1,144 4/	1,151 4/	1,200	1,200
Dolomite thousand tons	4,000	3,379 4/	3,466 4/	3,500	3,500
Limestone do.	33,000	33,000	30,000	30,000	30,000
Marble:					
In blocks cubic meters	275	275	300	300	300
Crushed and other	100	100	100	100	100
Petit granite (Belgian bluestone):					
Quarried thousand cubic meters	1,200	1,200	1,200	1,000	1,000
Sawed do.	100,000	100,000	100,000	100,000	100,000
Worked do.	15,000	15,000	15,000	15,000	15,000
Crushed and other do.	800,000	800,000	800,000	800,000	800,000
Porphyry, all types thousand tons	4,000	4,000	4,000	4,000	4,000
Quartz and quartzite	500,000	500,000	500,000	500,000	500,000
Sandstone:					
Rough stone including crushed thousand tons	2,400	2,400	2,400	2,400	2,400
Paving	15,000	15,000	14,000	14,000	14,000
Sand and gravel:					
Construction sand thousand tons	9,000	9,000	9,000	8,500	8,500
Foundry sand	500,000	500,000	500,000	500,000	500,000
Dredged sand thousand tons	2,300	2,300	2,300	2,000	2,000
Glass sand do.	1,900	1,900	1,900	1,800	1,800
Other sand do.	2,800	2,800	2,800	2,800	2,800
Gravel, dredged do.	5,000	5,000	5,000	5,000	5,000

See footnotes at end of table.

TABLE 1  
BELGIUM: PRODUCTION OF MINERAL COMMODITIES 1/

(Metric tons unless otherwise specified)

Commodity 3/	1995	1996	1997	1998	1999 e/
<b>INDUSTRIAL MINERALS--Continued</b>					
Sulfur: e/					
Byproduct:					
Elemental	160,000	160,000	160,000	160,000	160,000
Other forms	140,000	140,000	140,000	140,000	140,000
Total	300,000	300,000	300,000	300,000	300,000
Sulfuric acid, oleum	2,000	2,000	2,000	2,000	2,000
<b>MINERAL FUELS AND RELATED MATERIALS</b>					
Carbon black e/	1,500	1,500	1,500	1,000	1,000
Coke, all types	3,600 e/	3,550	3,401	3,400 e/	3,400
Gas, manufactured	550,000 e/	422,412	372,095	375,000 e/	375,000
Petroleum refinery products: e/					
Liquefied petroleum gas	5,500	13,321 3/	13,607 3/	14,000	14,000
Naphtha and white spirit	9,000	10,710 3/	13,354 3/	13,000	13,000
Gasoline	50,000	50,549 3/	57,979 3/	60,000	60,000
Jet fuel	13,000	13,000	13,000	13,000	13,000
Kerosene	600	600	600	600	600
Distillate fuel oil	85,000	85,000	85,000	85,000	85,000
Refinery gas	3,500	3,500	3,500	3,500	3,500
Residual fuel oil	38,000	46,286 3/	51,244 3/	50,000	50,000
Bitumen	4,000	4,677 3/	5,766 3/	5,000	5,000
Other	8,500	8,500	8,500	8,500	8,500
Refinery fuel and losses	12,000	12,000	12,000	12,000	12,000
Total	229,100	248,143	264,450	264,600	264,600

e/ Estimated. r/ Revised.

1/ Table includes data available through March 2000.

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

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

4/ Reported figure.

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

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

TABLE 2  
BELGIUM: STRUCTURE OF THE MINERAL INDUSTRY IN 1999

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Cadmium, metal	Union Minière (Sté. Générale de Belgique, 50.2%)	Balen	1,800
Cement	Major companies:		8,400
Do.	Cimenteries CBR SA (Sté. Générale de Belgique, or SGB)	Plants at Lixhe, Mons/Obourg, Harmignies, Marchienne, Ghent, et al.	3,200
Do.	Ciments d'Obourg SA	Plants at Obourg and Thieu	2,800 1/
Do.	Compagnie des Ciment Belge (Ciments Francais)	Plant at Gaurain-Ramecroix	2,400
Cobalt	Union Minière (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	Union Minière (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

See footnotes at end of table.

TABLE 2--Continued  
BELGIUM: STRUCTURE OF THE MINERAL INDUSTRY IN 1999

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners		Location of main facilities	Annual capacity
Limestone--Continued	Carmeuse S.A. (Long View Investment NV)		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	Refineries:		712,000
Do.	do.	Fina Raffinaderji Antwerp	Refinery at Antwerp	Of which: (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)
Steel:	Companies:			14,000
Do.	Cockerill Sambre SA (Government of Wallonia, 80%)		Plants at Liège and Charleroi	Of which: (5,000)
Do.	Sidmar NV (Belgian Government 28.24%; ARBED in Luxembourg, 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)
Zinc, metal	Union Minière (Sté. Générale de Belgique, 50.2%)		Smelter and refinery at Balen	450

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

TABLE 3  
LUXEMBOURG: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons)

Commodity 3/	1995	1996	1997	1998	1999 e/
Cement, hydraulic	714,067 r/	666,771 r/	650,000 r/ e/	650,000 r/ e/	600,000
Gypsum and anhydrite, crude e/	400	400	400	400	400
Iron and steel, metal:					
Pig iron	1,028,000	829,000	437,000	--	--
Steel:					
Crude	2,613,000	2,501,000	2,580,000	2,478,000	2,500,000
Semimanufactures	2,407,000	2,313,000	2,466,000	2,517,000	2,400,000
Phosphates, Thomas slag: e/					
Gross weight	500,000	500,000	500,000	475,000	475,000
P <sub>2</sub> O <sub>5</sub> content	75,000	75,000	75,000	70,000	70,000

e/ Estimated. r/ Revised. -- Zero.

1/ Table includes data available through March 2000.

2/ Estimated data are rounded to no more than three significant digits.

3/ 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 4  
LUXEMBOURG: STRUCTURE OF THE MINERAL INDUSTRY IN 1999

(Thousand metric tons)

Commodity	Major operating companies and major equity owners		Location of main facilities	Annual capacity
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%; and others)		Plants at Differdange, Dudelange, Esch-Belval, and Esch-Schiffange	5,320