

# THE MINERAL INDUSTRY OF BELGIUM AND LUXEMBOURG

By Harold R. Newman

The mineral-processing industry was a significant contributor to the Belgian economy in 1997. 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 in size, Belgium had a significant industrial minerals sector. Belgium was an important producer of four groups of industrial materials. These were carbonates, including limestone, dolomite, and whiting; synthetic materials in the form of soda ash and sodium sulfate; silica sand; and construction materials, including 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 the two separate regions of the country, Flanders and Wallonia. 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 ninth largest trading nation in the world, 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 was with other members of the European Union (EU) (U.S. Department of State, January 1998, Belgium, 1997 Country Reports on Economic Policy and Trade Practices, accessed April 15, 1998, at URL [http://www.state.gov/www/issues/economic/trade\\_reports/europe\\_canada97/belgium97.html](http://www.state.gov/www/issues/economic/trade_reports/europe_canada97/belgium97.html)).

Belgium, the Netherlands, and Luxembourg form the BENELUX customs unit. Since 1921, there has been a close economic union between Belgium and Luxembourg. 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 were 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.

The shares of the BLEU's exports accounted for by the EU amounted to 76%. Overall, the BLEU was responsible for 3.2% of world trade and was the world's leading exporter of raw and cut diamonds. Mineral products amounted to 4% of products

exported. The top five destinations of exports were, in descending order, Germany, France, the Netherlands, the United Kingdom, and Italy. The top five origins of imports were, in descending order, Germany, the Netherlands, France, the United Kingdom, and the United States ((Belgium-Luxembourg Economic Union in World Trade, 1997, Export statistics, accessed April 15, 1998, at URL <http://www.obcebdhbhe/en/Services/stats.html>).

Production of mineral commodities generally remained stable or increased somewhat during 1997. Increases in production generally followed the lines of exported goods, such as value-added nonferrous metals. (*See table 1.*)

Table 2 shows the principal mining and mineral-processing facilities in Belgium with their location and capacity. The only mining operations left in Belgium in 1997 were 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.

Table 3 shows the relation of selected classes of mineral commodities on Belgium-Luxembourg's balance-of-payments position in relation to the EU and the world.

Union Minière SA (UM), a world leader in the nonferrous metal sector, produced and sold more than 20 nonferrous metals. This production and development effort is split into five main areas that include cobalt, copper, germanium, special metals and the metallurgical recovery of precious metals from lead and copper materials, and zinc.

UM was the first company in Flanders to conclude an agreement with the Flemish Government for an integrated approach to deal with soil and ground-water pollution at all its company sites in Flanders. UM has carried out a series of studies into the quality of the soil and ground water at factory sites in Balen, Hoboken, Olen, and Overpelt. At certain places the soil and ground water have been polluted by more than 100 years of industrial activity. The agreement consists of the carrying out of descriptive soil surveys for all sites in Flanders, determining the order of priorities and nature of the remedial projects and carrying out these remediation projects. These measures will take place over a 10-year period (Union Minière S.A., 1997).

UM was also planning to build a new smelter and a new precious metal refinery at its Hoboken plant. These would produce lead, copper, nickel, and precious metals and was expected to be in operation by 1998. Not only will this increase Hoboken's unit capacity and reduce production costs, but it will reduce the amount of time that material is in the process stream and is expected to reduce environmental problems. The smelter will use an ISA smelting process for treating copper-bearing

materials (Mining Journal, 1997).

In June 1997, UM was chosen by the Bulgarian privatization agency to enter into exclusive negotiations for the acquisition of a 56% interest in Bulgaria's MDK Pirdop copper smelter. A 5-year investment plan at MDK Pirdop would include a capacity expansion and upgrade of the smelter, the construction of a new refinery, and environmental projects. Costs of the acquisition and investment program would be about \$300 million (Mining Journal, 1997).

Cement Bedrijven Nv (CBR) entered into an agreement with the Turkish Bank, Yapi ve Kredi Bankasi A.S., for the acquisition of a 97.7% stake in the Turkish cement company, Canakkale Cimento Sanayii (CCS). The deal, worth an estimated \$264 million, will increase CBR's total cement capacity by almost 20%. CCS operated a dry process plant at Canakkale, which had a name plate capacity of 3.2 million metric tons per year, making it the largest cement manufacturer in Turkey (Industrial Minerals, 1997).

Belgium, specifically Antwerp, retained its position in 1997 as the world's largest diamond center with a turnover in diamonds valued at about \$22 billion. The diamond industry contributed about \$3 billion to the nation's economy. Belgium's international trade in diamonds for 1994 to 1997 is shown in tables 4 and 5.

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

When the last coal mines in Belgium 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 all its crude oil for its four petroleum refineries. Belgium's seven nuclear powerplants supplied more than 60% of its electricity needs. Natural gas began to play a more important role as an energy source. Natural gas was considered to be more environmentally acceptable as a fuel, and Belgium, being at the center of the European gas grid, was favorably located for obtaining natural gas.

Belgian National Railways operated 3,568 kilometers (km) of standard-gauge track, 2,563 km of double track, and 2,207 km of electrified, all Government owned. The country had 137,876 km of roadways, of which 129,603 km was paved. The inland waterway system consisted of 2,043 km, of which 1,528 km was in regular use. The principal ports were Antwerp, Brugge, Ghent, Oostende, and Zeebrugge.

Corporate restructuring and the Government policy of budget cuts, 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 Belgian export-oriented markets rely heavily on the markets of its trading partners, and where these partners' profits increase and where cash flow increases and improves, Belgium's economy will also experience positive results for the near term.

## Luxembourg

Luxembourg's mineral industry consisted principally of raw materials processing and was dominated by the steel company Acieries Reunies de Burbach-Eich-Dudelang S.A., part of the ARBED Group, whose domestic and foreign subsidiaries have interests in steelmaking and steel products, cement, copper foil production, engineering, mining, information systems, and trading, among others.

As a member of the BLEU, trade statistics for Luxembourg are inextricably linked with those of Belgium and, therefore, cannot be listed individually. Steel was the country's main export commodity.

ARBED dominated the mineral industry and was involved in producing pig iron, crude steel, and stainless steel, all from imported material. Also, the company was involved in other areas of the economy, such as the cement and brickmaking industries.

The iron and steel sector remained the most important industrial sector of the economy. Production remained below that of several years ago as an adjustment to meet demand that has been low in the recent past.

Mining in Luxembourg was represented by small industrial mineral operations that produced material for domestic consumption. These minerals included dolomite, limestone, sand and gravel, and slate. (See table 6.) Luxembourg's principal producers of mineral industry products are listed in table 7.

Luxembourg is a landlocked country with 272 km of standard-gauge track, 178 km of double track, and 197 km of electrified railways operated by the Luxembourg National Railways. The country had 5,108 km of roadways, of which 4,995 km was paved. The only waterway is the Moselle River, of which 37 km in Luxembourg is navigable, and the only river port was Mertert.

## References Cited

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- Mining Journal, 1997, Union Minière's plan: Mining Journal [London], v. 329, no. 8443, p. 161, 162.
- Union Minière SA, 1997, First to conclude a framework agreement with OVAM: Brussels, Union Minière SA press release, December 10, 2 p.

## Major Sources of Information

- Institute National de Statistiques  
Rue de Louvain 44  
1000 Brussels, Belgium
- Ministere des Affaires Economiques  
NG III Blvd E. Jacqmaain, 154  
1000 Brussels, Belgium
- Service Geological de Belgique  
Rue Jenner 13  
1040 Brussels, Belgium
- Service Central de la Statistique et des Etudes Economiques (STATEC)  
6, boulevard Royal  
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TABLE 1  
BELGIUM: PRODUCTION OF MINERAL COMMODITIES 1/

(Metric tons unless otherwise specified)

Commodity 2/	1993	1994	1995	1996	1997 e/
<b>METALS</b>					
Aluminum, secondary including unspecified metals e/	4,000	4,000	4,000	3,000	2,000
Arsenic, white e/	2,000	2,000	2,000	2,000	2,000
Bismuth metal e/	950	900	900	800	800
Cadmium, primary	1,573	1,556	1,710	1,580 e/	1,420 3/
Cobalt, primary e/	--	1,200	1,000	1,000	1,000
<b>Copper:</b>					
Blister: e/					
Primary	200	2,600	1,000	--	--
Secondary	141,500	145,000	146,000	157,300 r/	142,500
Total	141,700	147,600	147,000	157,300 r/	142,500
Unwrought, total of smelter and refined, primary and secondary including alloys e/					
	455,235 3/	468,000	465,000	470,000	450,000
Refined, primary and secondary, including alloys					
	378,890	371,152	376,000 r/	354,000 r/	390,000
<b>Iron and steel:</b>					
Pig iron	8,178	8,974	9,199	8,628 r/	8,077 3/
Ferroalloys, electric furnace, ferromanganese e/	25,000	25,000	25,000	25,000	25,000
<b>Steel:</b>					
Crude	10,173	11,319	11,606	10,773 r/	10,738 3/
Hot-rolled products	9,750	11,266	11,540	10,963 r/	11,000
<b>Lead:</b>					
Smelter: e/					
Primary 4/	76,000	76,000	75,000	75,000	75,000
Secondary 5/	25,400 3/	25,500	25,000	25,000	25,000
Total	101,400	101,500	100,000	100,000	100,000
<b>Refined:</b>					
Primary	105,712	97,200	95,300 e/	94,400 e/	84,400
Secondary	25,400	26,300	26,400 e/	31,000 r/ e/	26,400 3/
Total	131,112	123,500	121,700 e/	125,400 r/ e/	110,800
Selenium e/	250	250	250	250	250
Tin metal, secondary including alloys e/	5,000	5,000	5,000	3,000	3,000
<b>Zinc:</b>					
Slab:					
Primary	209,600	211,200	211,100	207,400 e/	213,600 3/
Secondary (possibly remelted zinc) e/	90,000	95,000	29,000	27,000 e/	30,000
Total	299,600	306,200	240,100	234,400 e/	243,600
Powder	37,700 3/	40,000	36,000	36,000	36,000
<b>INDUSTRIAL MINERALS</b>					
Barite e/	30,000	30,000	30,000	30,000	30,000
Cement, hydraulic e/	7,612 3/	8,000	8,000	6,997 3/	7,001 3/
Clays, kaolin e/	300	300	300	300	300
Lime and dead-burned dolomite, quicklin	1,750	1,750	1,800	1,800	1,750
Nitrogen, N content of ammonia e/	535 3/	500	500	500	500
<b>Sodium compounds: e/</b>					
Soda ash	375	--	--	--	--
Sulfate	250	250	250	250	250
<b>Stone, sand and gravel: e/</b>					
<b>Calcareous:</b>					
Alabaster e/	1,000	1,100	1,167 3/	1,144 3/	1,151 3/
Dolomite e/	4,000	4,000	4,000	3,379 3/	3,466 3/
Limestone	33,400 3/	33,500	33,000	33,000	30,000
<b>Marble:</b>					
In blocks	250	250	275	275	300
Crushed and other	80	80	100	100	100
<b>Petit granite (Belgian bluestone):</b>					
Quarried	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000
Sawed	90,000	90,000	100,000	100,000	100,000
Worked	15,000	15,000	15,000	15,000	15,000
Crushed and other	800,000	800,000	800,000	800,000	800,000
Porphyry, all types	4,000	4,000	4,000	4,000	4,000

See footnotes at end of table.

## BELGIUM: PRODUCTION OF MINERAL COMMODITIES 1/

(Metric tons unless otherwise specified)

Commodity 2/	1993	1994	1995	1996	1997 e/
<b>INDUSTRIAL MINERALS--Continued</b>					
<b>Stone, sand and gravel--Continued:</b>					
<b>Petit granite (Belgian bluestone)--Continued:</b>					
Quartz and quartzite	500,000	500,000	500,000	500,000	500,000
<b>Sandstone:</b>					
Rough stone including crushed	thousand tons	2,400	2,400	2,400	2,400
Paving	14,000	14,000	15,000	15,000	14,000
<b>Sand and gravel:</b>					
Construction sand	thousand tons	9,200	9,200	9,000	9,000
Foundry sand	525,000	525,000	500,000	500,000	500,000
Dredged sand	thousand tons	2,300	2,300	2,300	2,300
Glass sand	do.	1,950	1,950	1,900	1,900
Other sand	do.	2,800	2,800	2,800	2,800
Gravel, dredged	do.	5,000	5,000	5,000	5,000
<b>Sulfur: e/</b>					
<b>Byproduct:</b>					
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	thousand tons	2,000	2,000	2,000	2,000
<b>MINERAL FUELS AND RELATED MATERIALS</b>					
Carbon black e/	1,700	1,700	1,500	1,500	1,500
Coke, all types	thousand tons	3,895	3,673	3,600 e/	3,401 3/
Gas, manufactured e/	thousand cubic meters	550,000	550,000	550,000	422,412 3/
<b>Petroleum refinery products:</b>					
Liquefied petroleum gas	thousand 42-gallon barrels	4,620	5,930	5,500 e/	13,321 3/
Naphtha and white spirit e/	do.	9,200	9,200	9,000	10,710 3/
Gasoline	do.	47,700	48,500	50,000 e/	50,549 3/
Jet fuel	do.	12,100	13,200	13,000 e/	13,000 e/
Kerosene	do.	597	566	600 e/	600 e/
Distillate fuel oil	do.	79,800	85,100	85,000 e/	85,000 e/
Refinery gas e/	do.	3,500	3,500	3,500	3,500
Residual fuel oil e/	do.	43,900 3/	37,600	38,000	46,286 3/
Bitumen e/	do.	4,000	4,000	4,000	4,677 3/
Other e/	do.	8,500	8,500	8,500	8,500
Refinery fuel and losses e/	do.	11,700 3/	12,000	12,000	12,000
Total e/	do.	225,617	228,096	229,100	248,143

e/ Estimated. r/ Revised.

1/ Table includes data available through May 1998.

2/ In addition to the 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 it did not require resmelting; data are not adequate to permit differentiation.

TABLE 2  
BELGIUM: STRUCTURE OF THE MINERAL INDUSTRY IN 1997

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Cadmium, metal	tons	Vieille-Montagne NV	Balen-Wezel	1,550
Do.	do.	NV Metallurgie Hoboken-Overpelt SA (NV MHO SA)	Overpelt	600
Cement		Major companies:		8,400
Do.		Cimenteries CBR SA (Societe Generale 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)
Copper		Metallurgie Hoboken-Overpelt SA (Union Minière SA)	Smelter at Antwerp-Hoboken	50
Do.		Metallo-Chimique NV	Refinery at Olen	330
Dolomite		Carsambre SA Dolomeuse	Smelter at Beerse	80
Do.		do.	Quarry at Floreffe	300
Do.		do.	Quarry at Marche les Dames	600
Do.		do.	Plant at Namur	37
Do.		SA de Marche-les-Dames	Quarries at Vezin and Scalaigieux and Scalaigieux	300
Do.		do.	Plant at Vezin	35
Do.		SA des Dolomies de Marche-les-Dames	Quarry at Nameche	300
Do.		do.	Of which:	
Do.		do.	Soft-burned	500
Do.		do.	Dead-burned	200
Do.		SA Dolomies de Villiers-le-Gambon	Quarry at Villiers-le-Gambon	300
Lead, metal		Metallurgie Hoboken-Overpelt SA (Union Minière SA)	Smelter at Antwerp-Hoboken	90
			Refinery at Antwerp-Hoboken	125
Petroleum, refined	42-gallon barrels per day	Refineries:		602,000
Do.	do.	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)
Steel:		Companies:		14,000
Do.		Cockerill Sambre SA (Government of Wallonia, 80%)	Plants at Liège and Charleroi	(5,000)
Do.		Sidmar NV (ARBED in Luxembourg, 66.97%; Belgian Government, 28.11%)	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		Vieille-Montagne SA (Union Minière SA)	Smelter at Balen-Wezel	385

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

TABLE 3  
BELGIUM-LUXEMBOURG: BALANCE OF PAYMENTS, SELECTED MINERAL COMMODITIES IN 1996 1/

(Thousand dollars)

Mineral commodity	Exports to EU 2/	Imports from EU	Net gain or (loss)	Exports to the world	Imports from the world	Net gain or (loss)
<b>Crude industrial minerals:</b>						
Clays, kaolin	\$39,117	\$60,067	(\$20,950)	\$47,470	\$79,193	(\$31,723)
Feldspar	4	3,486	(3,482)	155	9,719	(9,564)
Magnesite	145	119	26	157	182	(25)
Marble	6,866	9,550	(2,684)	7,193	9,886	(2,693)
Slate	2,498	6,636	(4,138)	2,602	6,861	(4,259)
Other	515,587	503,531	12,056	600,281	781,153	(180,872)
<b>Total</b>	<b>564,217</b>	<b>583,389</b>	<b>(19,172)</b>	<b>657,858</b>	<b>886,994</b>	<b>(229,136)</b>
<b>Metalliferous ores:</b>						
Copper	6	151	(145)	630	11,839	(11,209)
Lead	6,857	15,204	(8,347)	6,920	70,051	(63,131)
Tin	22	2	20	103	6	97
Zinc	99,302	66,793	32,509	100,288	177,193	(76,905)
Other (including waste and scrap)	451,734	1,549,688	(1,097,954)	720,203	2,726,837	(2,006,634)
<b>Total</b>	<b>557,921</b>	<b>1,631,838</b>	<b>(1,073,917)</b>	<b>828,144</b>	<b>2,985,926</b>	<b>(2,157,782)</b>
<b>Nonmetallic mineral manufactures:</b>						
Diamonds, natural, not set or strung	1,563,654	2,921,895	(1,358,241)	10,693,881	10,268,270	425,611
Lime	247	8,940	(8,693)	259	8,941	(8,682)
Mica	20,603	1,019	19,584	20,603	1,749	18,854
Millstones, grindstones, etc.	66,010	48,164	17,846	75,381	66,026	9,355
Portland cement	110,958	40,830	70,128	247,077	52,414	194,663
Precious stones, natural	3,187	816	2,371	30,425	33,949	(3,524)
Precious stones, synthetic	1,183	549	634	2,061	1,921	140
Stone, building	64,761	107,825	(43,064)	69,389	120,504	(51,115)
Sulfuric acid	21,627	17,796	3,831	23,070	18,955	4,115
<b>Metals:</b>						
<b>Aluminum, metal including alloys:</b>						
Unwrought	209,857	628,078	(418,221)	221,371	763,369	(541,998)
Semimanufactures	1,128,045	613,559	514,486	1,330,793	692,216	638,577
<b>Total</b>	<b>1,337,902</b>	<b>1,241,637</b>	<b>96,265</b>	<b>1,552,164</b>	<b>1,455,585</b>	<b>96,579</b>
Iron and steel	8,479,968	4,252,481	4,227,487	10,065,056	4,825,523	5,239,533
<b>Magnesium, metal including alloys:</b>						
Scrap	121	5	116	1,217	5	1,212
Unwrought	8,398	9,168	(770)	8,415	13,008	(4,593)
Semimanufactures	2,837	3,356	(519)	3,129	3,903	(774)
<b>Total</b>	<b>11,356</b>	<b>12,529</b>	<b>(1,173)</b>	<b>12,761</b>	<b>16,916</b>	<b>(4,155)</b>
Mercury	50	121	(71)	80	165	(85)
Other nonferrous metals	2,474,261	978,639	1,495,622	2,915,386	2,007,170	908,216
<b>Total, metals</b>	<b>10,957,116</b>	<b>5,234,597</b>	<b>5,722,519</b>	<b>12,983,651</b>	<b>6,836,761</b>	<b>6,146,890</b>
Mineral fuels	3,201,678	6,570,336	(3,368,658)	4,423,277	9,246,323	(4,823,046)

1/ Table prepared by Glenn J. Wallace, International Data Unit.

2/ EU, European Union.

TABLE 4  
BELGIUM: EXPORTS AND REEXPORTS OF DIAMOND

Destinations	1995		1996		1997	
	Quantity (carats)	Value ( thousands)	Quantity (carats)	Value ( thousands)	Quantity (carats)	Value ( thousands)
<u>Sorted, unworked or simply sawn, cleaved, or bruted:</u>						
Hong Kong	1,822,776	\$37,003	1,721,275	\$50,953	2,860,048	\$66,911
India	82,547,659	2,249,640	92,531,981	2,083,237	121,751,318	2,440,453
Israel	7,051,162	1,835,839	6,298,635	1,962,882	7,409,619	2,095,025
Malaysia	415,042	78,298	375,367	72,642	265,408	48,682
South Africa	89,718	53,388	154,400	48,553	66,584	30,330
Sri Lanka	1,244,669	211,220	733,684	108,928	646,505	93,782
Switzerland	507,073	144,882	1,411,670	154,026	2,070,510	114,520
Thailand	1,244,669	211,220	1,303,693	219,934	1,050,297	157,175
Tunisia	33,700	5,131	36,168	5,957	38,139	5,855
United Kingdom	5,003,377	578,951	7,876,475	825,335	3,358,291	424,614
United States	533,905	365,429	530,992	398,945	881,271	384,069
Unspecified	460,771	440,294	3,827,633	315,238	96,303,222	355,555
Total	100,954,525	5,842,745	116,801,973	6,246,630	145,134,025	6,216,971
<u>Worked, but not mounted or set:</u>						
Germany	312,174	\$228,281	315,215	\$214,978	295,258	\$199,383
Hong Kong	828,602	539,027	1,002,874	568,501	1,162,034	606,471
Israel	526,382	342,204	634,934	405,122	633,472	473,391
Italy	311,296	148,354	370,723	196,059	528,794	259,159
Japan	527,585	691,432	506,836	549,176	301,170	346,389
Switzerland	615,554	472,952	587,933	482,261	572,266	399,052
Thailand	281,740	205,528	293,465	223,996	161,141	97,099
United Kingdom	189,034	263,017	212,571	317,910	226,494	260,769
United States	1,572,308	1,312,395	1,670,123	317,910	1,735,450	1,626,132
Unspecified	1,029,256	693,277	1,378,337	810,254	1,383,563	917,708
Total	6,193,931	4,896,467	6,973,011	5,191,510	6,999,642	5,098,163

Source: Diamond International, March-April, 1998, no 52, London, United Kingdom.

TABLE 5  
BELGIUM: IMPORTS OF DIAMONDS

Sources	1995		1996		1997	
	Quantity (carats)	Value ( thousands)	Quantity (carats)	Value ( thousands)	Quantity (carats)	Value ( thousands)
Natural rough, unsorted, and unworked or simply sawn, cleaved, or bruted:						
Angola	562,665	\$152,948	820,153	\$229,375	1,004,581	\$270,282
Australia	9,158,490	62,680	27,341,654	191,805	40,230,158	264,334
Commonwealth of Independent States	4,802,359	131,856	5,124,706	140,270	5,508,142	127,962
Côte d'Ivoire	1,614,396	121,046	5,124,706	202,685	885,351	116,325
Israel	2,667,741	366,300	2,865,656	451,316	3,398,447	527,177
Liberia	10,677,741	757,338	12,329,009	611,532	5,803,113	327,061
Sierra Leone	455,062	88,277	556,457	92,747	802,862	114,326
Switzerland	635,814	127,618	1,569,869	111,008	3,730,175	934,886
United Kingdom	28,862,328	2,474,073	39,911,802	2,745,058	47,181,667	2,845,127
United States	963,080	103,847	509,826	102,718	844,771	111,586
Zaire, Republic of	23,113,137	1,067,263	22,755,452	1,270,511	19,630,738	1,000,608
Unspecified	13,351,744	897,770	13,889,327	940,229	12,902,995	73,942
Total	95,864,524	6,351,016	129,888,307	7,089,254	143,378,800	6,713,616
Worked, but not mounted or set:						
Commonwealth of Independent States	515,759	431,689	822,136	583,577	454,896	335,255
Germany	163,280	125,197	155,536	111,557	134,730	99,819
Hong Kong	276,698	188,375	274,680	172,785	344,473	259,174
India	2,076,986	724,182	2,424,577	755,234	2,318,055	709,508
Israel	458,301	474,617	511,631	544,051	567,832	584,564
South Africa	87,648	136,855	91,295	143,335	80,732	111,126
Sri Lanka	240,111	114,283	243,522	109,047	232,111	101,603
Switzerland	193,787	255,256	147,436	276,009	165,098	249,490
Thailand	430,544	231,311	378,130	214,028	375,904	197,047
United Kingdom	103,003	195,419	106,808	235,772	86,537	148,915
United States	579,267	508,253	685,971	597,948	646,994	667,265
Unspecified	758,472	507,621	914,893	594,184	1,053,330	683,704
Total	5,883,856	3,893,058	6,756,615	4,337,527	6,460,692	4,147,470

Source: Diamond International, March-April, 1998, no. 52, London.

TABLE 6  
LUXEMBOURG: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodity	1993	1994	1995	1996	1997 <sup>e/</sup>
Cement, hydraulic <sup>e/</sup>	620,000	620,000	600,000	600,000	580,000
Gypsum and anhydrite, crude <sup>e/</sup>	400	400	400	400	400
Iron and steel, metal:					
Pig iron	2,411,000	1,927,000	1,028,000 <sup>r/</sup>	829,000 <sup>r/</sup>	437,000 <sup>3/</sup>
Steel:					
Crude	3,293,000	3,092,000	2,613,000 <sup>r/</sup>	2,501,000 <sup>r/</sup>	2,580,000
Semimanufactures	3,650,000	3,620,000	2,407,000 <sup>r/</sup>	2,313,000 <sup>r/</sup>	2,400,000
Phosphates: Thomas slag: <sup>e/</sup>					
Gross weight	555,000	472,000	500,000	500,000	500,000
P <sub>2</sub> O <sub>5</sub> content	100,000	75,000	75,000	75,000	75,000

<sup>e/</sup> Estimated. <sup>r/</sup> Revised.

1/ Table includes data available through March 1998.

2/ 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.

3/ Reported figure.

TABLE 7  
LUXEMBOURG: STRUCTURE OF THE MINERAL INDUSTRY IN 1996

(Thousand metric tons)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Cement	SA des Ciments Luxembourgeois (Acieries Reunies de Burbach-Eich Dudelang, 50%; Societe Generale de Belgique, 25%)	Plant at Esch-sur-Alzette	450
Do.	Intermoselle SARL (ARBED, 33%)	Plant at Rumelange	1,000
Steel	Acieries Reunies de Burbach-Eich-Dudelang (ARBED) (Societe Generale de Belgique, 25%; Belgian Government, 31%; others)	Plants at Differdange, Dudelange, Esch-Belval, and Esch-Schifflange	5,320