

THE MINERAL INDUSTRY OF BELGIUM AND LUXEMBOURG

By Harold R. Newman

Belgium

The mineral processing industry was a significant contributor to the Belgian economy. 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 was carried out in high-technology large-scale plants. Europe's largest electrolytic copper and zinc refineries are in Belgium, as is 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. Complex industrial wastes were processed by various sophisticated techniques to recover rare or precious metals.

Although the country is relatively small in size, Belgium has a significant industrial minerals sector. Belgium is an important producer of four groups of industrial materials: 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 assumed the responsibility of environmental protection in their own areas of concern and contribute to environmental investment programs. These investments range from treatment of oil effluent to reducing air emissions.

Belgium is a major exporting country and is the ninth largest trading nation in the world. Imports and exports are equivalent to nearly 70% of the country's gross domestic product, making Belgium one of the highest per capita exporters in the world. It has a long history of reliance on international trade.

Belgium, together with Luxembourg and the Netherlands, forms the BENELUX customs unit. Belgium is also a partner in the Belgium-Luxembourg Union (BLEU) which results in close economic integration between the two countries. International trade data for Belgium were covered in the context of the BLEU, and as such covered the exports, reexports, and imports of Luxembourg. Although detailed trade data have not been available for several years, other members of the European Union (EU) were the most

important trading partners accounting for about 81% of exports. Destinations and sources continue to be Germany, (40%), and France (25%), with the Netherlands, the United Kingdom, and Italy, accounting for most of the remainder.

Production of mineral commodities generally remained stable or increased somewhat during 1995. Increases in production generally followed the lines of exported goods, such as value-added nonferrous metals. (*See table 1.*)

Table 2 shows the principal mineral-resource plants in Belgium with their location and capacity. The only mining operations left in Belgium in 1995 were the production of sand and gravel and the quarrying of stone. 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 relationship of selected classes of mineral commodities on Belgium-Luxembourg's balance of payments position in relation to the EU and the world.

In 1995, Union Minière SA (UM), traditionally a producer of cobalt special products such as powders and chemicals, started producing refined cobalt as well. Also, UM increased the capacity of its cobalt/nickel refinery to 1,200 t/yr. The company announced plans to further increase capacity to 1,600 t/yr to 1,800 t/yr by 1996. The upgraded facility was equipped to process a variety of materials, from low-grade cobalt metal to a variety of cobalt-bearing scraps and residues.

UM announced plans to modernize its operations by replacing a major part of its copper refinery at Olen with a new facility, probably by 1997. The new plant would have a capacity of 200,000 t/yr, which is lower than the 270,000 t/yr capacity of the existing plant. The company announced that part of the old facility could be maintained to make up for any shortfall in output from the new facility.

UM was also planning to build a new smelter and a new precious metals refinery at its Hoboken plant. These would produce lead, copper, nickel, and precious metals and was expected to be in operation by the end of 1997. Not only will this increase Hoboken's unit capacity and reduce production costs, it will reduce the amount of time that material is in process and reduce environmental problems at Hoboken.

These plans are directed toward making UM the largest zinc producer in Europe and the world's leading refined copper, cobalt, and germanium producer.

Cockerill Sambre SA, Belgium's largest steel group, acquired the German steel concern EKO Stahl GmbH, the largest steel plant in what was the former German Democratic Republic (GDR). In the agreement with Treuhandanstalt, the agency responsible for privatizing concerns in the former GDR, Cockerill Sambre acquired 60% of EKO Stahl, effective January 1, 1995, and the successor of the Treuhandanstalt retained 40%. However, Cockerill Sambre was granted the option to acquire the remaining 40% but the German agency could not exercise its right to sell the 40% before December 31, 1999.

The contract for the acquisition of EKO Stahl included the installation of a hot-rolling mill, which had been lacking at the plant, an upgrade of the plant's cold-rolling mill and the installation of a new blast furnace. When the upgrade is completed, planned for 1998, EKO Stahl would be an integrated steel plant. Acquisition of this steel plant not only was expected to give Cockerill Sambre ready access to the important domestic steel market in the eastern states of Germany, but also to that of the nations of eastern Europe, a market expected to expand in the near future.

UM closed its zinc refinery at Overpelt and canceled plans to double the capacity of its zinc refinery at Balen. In addition, UM sold its zinc mines and refinery of the Tennessee-based Union Mines in the United States. These actions followed UM's corporate decision to reduce zinc operations.

Belgium, specifically Antwerp, retained its position in 1995 as the world's leading diamond center with a turnover of diamonds valued at around \$19 billion. The diamond industry contributed more than \$2 billion to the nation's economy. Belgium's international trade in diamonds for 1993-95 is shown in tables 3 and 4.

Belgium is recognized worldwide for the diversity and quality of its dimension stone. The so-called "petit granit," actually a dark blue-grey crinoidal limestone, is 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 the Wallonia region. Red, black, and gray are the principal color ranges of the marble, most of which is exported.

When the last coal mines in Belgium closed in 1992, the country became entirely dependent on imported primary energy. Belgium imports all its crude oil for its four petroleum refineries and imports coal to meet the needs of the steel, cement, and power-generating industries. Belgium's seven nuclear powerplants supplied over 60% of its electricity needs. Natural gas has begun to play a more important role as an energy source. Natural gas was more environmentally acceptable as a fuel and Belgium was at the center of the European gas grid.

Belgian National Railways operated 3,568 kilometer (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 were paved. The inland waterway system consisted of 2,043 km of which 1,528 were in regular use. The principal ports were Antwerp, Brugge, Ghent, Oostende, and Zeebrugge.

Corporate restructuring and the Government policy of budget cuts, split among the Federal Government and the regional authorities of Flanders and Wallonia were expected to make Belgian products more competitive on the world market. The Belgium export-oriented market relied heavily on the markets of its trading partners, and as profits increase and cash flow increases and improves, it is expected that the economy will continue to experience positive results for the next few years.

Luxembourg

Luxembourg's mineral industry consisted principally of raw materials processing and was dominated by the steel company ARBED 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 are not able to be listed individually.

ARBED dominates the mineral industry and is involved in producing pig iron from imported iron ore, crude steel, stainless steel, and was involved in other areas of the economy, such as the cement and brickmaking industries. Steel is the Country's main export commodity. Mining in Luxembourg is represented by small industrial mineral operations that produce material for domestic consumption. These minerals include dolomite, limestone, sand and gravel, and slate. (*See table 5.*)

Luxembourg's principal producers of mineral industry products are shown in table 6.

The iron and steel sector remained the most important industrial sector of the economy. Although production remained below that of several years ago, it was not seen as a problem since production can be adjusted to meet demand which has been low in the recent past.

Luxembourg is a landlocked country with 272 km of standard-gauge track, 178 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 were paved. The only waterway is the Moselle River, of which 37 km in Luxembourg is navigatable, and the only river port was Merttert.

TABLE 1
BELGIUM: PRODUCTION OF MINERAL COMMODITIES 1/

(Metric tons unless otherwise specified)

Commodity 2/	1991	1992	1993	1994	1995 e/
METALS					
Aluminum, secondary including unspecified metals e/	7,390 3/	7,000	4,000	4,000	4,000
Arsenic, white e/	2,500	2,000	2,000	2,000	2,000
Bismuth, metal e/	800	800	950	900	900
Cadmium, primary	1,807	1,550	1,573	1,556	1,700
Cobalt, primary	--	--	--	1,200 e/	1,000
Copper:					
Blister: e/					
Primary	1,000	800	200	2,600	1,000
Secondary	105,000	102,000	141,500	145,000	146,000
Total	106,000	102,800	141,700	147,600	147,000
Unwrought, total of smelter and refined, primary and secondary, including alloys	478,756	471,985	455,235	468,000 e/	465,000
Refined, primary and secondary including alloys	297,593	367,318	378,890	371,152	370,000
Iron and steel:					
Pig iron	9,354,000	8,524,000	8,178,000	9,030,000	9,000,000
Ferroalloys, electric furnace, ferromanganese e/	25,000	25,000	25,000	25,000	25,000
Steel:					
Crude	11,334,883	10,337,352	10,172,616	11,319,234	11,606,000
Hot-rolled products	8,754,645	8,185,659	9,750,000	11,000,000	10,000
Lead:					
Smelter:					
Primary e/ 4/	69,800	75,400	76,000	76,000	75,000
Secondary 5/	21,200	19,700	25,400	25,500 e/	25,000
Total e/	91,000	95,100	101,400	101,500	100,000
Refined:					
Primary	89,484	96,597	105,712	97,200 r/	95,300
Secondary	21,200	19,700	25,400	26,300 r/	26,400
Total	110,684	116,297	131,112	123,500 r/	121,700
Selenium e/	250	250	250	250	250
Tin metal, secondary including alloys e/	4,426 3/	5,260	5,000	5,000	5,000
Zinc:					
Slab:					
Primary	297,600	217,200	209,600	211,200 r/	210,000
Secondary (possibly remelted zinc) e/	87,000	93,400	90,000	95,000	90,000
Total	384,600	310,600	299,600	306,200 r/	300,000
Powder	52,400	43,700	37,700	40,000 e/	36,000
INDUSTRIAL MINERALS					
Barite e/	35,000	30,000	30,000	30,000	30,000
Cement, hydraulic	7,180,000	8,070,000	7,570,000 r/	8,000,000 e/	8,000,000
Clays, kaolin e/	260,000 3/	325,000	300,000	300,000	300,000
Lime and dead-burned dolomite, quicklime	2,020,000	1,870,000	1,750,000 e/	1,750,000 e/	1,800,000
Nitrogen, N content of ammonia	272,000	514,000 r/	535,000 r/	500,000 e/	500,000
Sodium compounds: e/					
Soda ash	380,000	375,000	375,000	-- 3/	--
Sulfate	260,000	250,000	250,000	250,000	250,000
Stone, sand and gravel:					
Calcareous:					
Dolomite	4,030,000	3,980,000	4,000,000	4,000,000 e/	4,000,000
Limestone	34,300,000	33,400,000	33,400,000	33,500,000 e/	33,000,000
Marble:					
In blocks					
cubic meters	358	232	250	250 e/	275
Crushed and other e/	80 3/	80	80	80	100
Petit granite (Belgian bluestone):					
Quarried e/					
cubic meters	864,000 3/	1,210,000	1,200,000	1,200,000	1,200,000
Sawed e/					
do.	67,700 3/	90,000	90,000	90,000	100,000
Worked e/					
do.	12,000 3/	15,000	15,000	15,000	15,000

See footnotes at end of table.

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

(Metric tons unless otherwise specified)

Commodity 2/	1991	1992	1993	1994	1995 e/	
INDUSTRIAL MINERALS--Continued						
Stone, sand and gravel						
Petit granite (Belgian bluestone)						
Crushed and other e/	cubic meters	599,000 3/	800,000	800,000	800,000	800,000
Porphyry, all types		3,970,000 3/	4,130,000	4,000,000	4,000,000	4,000,000
Quartz and quartzite e/		403,000 3/	500,000	500,000	500,000	500,000
Sandstone: e/						
Rough stone including crushed		2,660,000 3/	2,400,000	2,400,000	2,400,000	2,400,000
Paving		14,400 3/	14,000	14,000	14,000	15,000
Sand and gravel: e/						
Construction sand		9,160,000 3/	9,200,000	9,200,000	9,200,000	9,000,000
Foundry sand		489,000 3/	525,000	525,000	525,000	500,000
Dredged sand		2,310,000 3/	2,300,000	2,300,000	2,300,000	2,300,000
Glass sand		2,070,000 3/	1,950,000	1,950,000	1,950,000	1,900,000
Other sand		2,790,000 3/	2,800,000	2,800,000	2,800,000	2,800,000
Gravel, dredged		4,190,000 3/	4,900,000	5,000,000	5,000,000	5,000,000
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		1,940,000	1,910,000	2,000,000	2,000,000	2,000,000
MINERAL FUELS AND RELATED MATERIALS						
Carbon black e/		1,700	1,700	1,700	1,700	1,500
Coal, bituminous		636,000	226,000	--	--	--
Coke, all types		4,887,000	4,510,000	3,895,000 r/ e/	3,673,000	3,600,000
Gas:						
Manufactured	thousand cubic meters	565,000	551,000	550,000 e/	550,000	550,000
Natural (byproduct of coalmining):						
Gross	do.	11,000 e/	7,500	--	--	--
Marketable	do.	6,690	4,000	--	--	--
Petroleum refinery products:						
Liquefied petroleum gas	thousand 42-gallon barrels	5,310	4,330	4,620	5,930	5,500
Aviation gasoline	do.	12	--	--	--	--
Naphtha and white spirit e/	do.	12,200 3/	8,600	9,200	9,200	9,000
Gasoline	do.	50,000	52,400	47,700	48,500	50,000
Jet fuel	do.	12,400	13,700	12,100	13,200	13,000
Kerosene	do.	690	566	597	566	600
Distillate fuel oil	do.	81,900	80,500	79,800	85,100	85,000
Refinery gas e/	do.	3,810 3/	3,500	3,500	3,500	3,500
Residual fuel oil	do.	48,500	44,800	43,900	37,600	38,000
Bitumen e/	do.	5,060 3/	4,000	4,000	4,000	4,000
Other e/	do.	10,000	8,500	8,500	8,500	8,500
Refinery fuel and losses	do.	12,000	12,300	11,700	12,000	12,000
Total e/	do.	241,882 r/	233,196	225,617	228,096	229,100

e/ Estimated. r/ Revised.

1/ Table includes data available through May 1996.

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, but data are not adequate to permit differentiation.

TABLE 2
BELGIUM-LUXEMBOURG: 1994 BALANCE OF PAYMENTS, SELECTED MINERAL COMMODITIES 1/

(Thousand dollars)

Mineral commodity	Exports to EU	Imports from EU	Net gain or (loss)	Exports to the world	Imports from the world	Net gain or (loss)
Crude industrial minerals:						
Diamond, industrial	21,820	20,851	969	57,038	152,525	(95,487)
Stone, dimension	24,110	25,891	(1,781)	26,231	56,997	(30,766)
Other	418,187	478,184	(59,997)	469,375	656,290	(186,915)
Total	464,117	524,926	(60,809)	552,644	865,812	(313,168)
Metalliferous ores:						
Iron ore	2,384	24,056	(21,672)	2,441	395,834	(393,393)
Copper	193	496	(303)	740	5,872	(5,132)
Lead	5,129	4,699	430	5,138	71,119	(65,981)
Zinc	52,046	28,382	23,664	52,104	149,763	(97,659)
Other (including waste and scrap)	331,648	1,070,980	(739,332)	492,940	1,640,250	(1,147,310)
Total	391,400	1,128,613	(737,213)	553,363	2,262,838	(1,709,475)
Nonmetallic mineral manufactures						
Total	1,714,331	2,876,060	(1,161,729)	9,790,425	9,221,998	568,427
Metals:						
Iron and steel	6,375,982	3,062,565	3,313,417	8,067,657	3,600,055	4,467,602
Mercury	29	234	(205)	45	275	(230)
Other nonferrous metals	2,743,696	1,629,411	1,114,285	3,453,689	2,687,603	766,086
Total	9,119,707	4,692,210	4,427,497	11,521,391	6,287,933	5,233,458
Mineral fuels						
Total	2,920,557	5,889,306	(2,968,749)	4,160,735	8,596,106	(4,435,371)

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

TABLE 3
BELGIUM: STRUCTURE OF THE MINERAL INDUSTRY FOR 1995

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners		Location of main facilities	Annual capacity
		tons			
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
Do.				Smelter at Beerse	80
Dolomite			Carsambre SA Dolomeuse	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
Do.				Refinery at Antwerp-Hoboken	125
Petroleum, refined	42-gallon barrels per day		Refineries:		602,000
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 28.11%; ARBED in Luxembourg, 66.97%)	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 4
BELGIUM: EXPORTS AND REEXPORTS OF DIAMOND

Destinations	1993		1994		1995	
	Quantity (carats)	Value (thousands)	Quantity (carats)	Value (thousands)	Quantity (carats)	Value (thousands)
Sorted, unworked or simply sawn, cleaved, or bruted:						
Hong Kong	477,509	35,538	1,006,262	46,125	1,822,776	37,003
India	70,000,000	1,600,534	64,068,213	1,577,182	82,547,659	2,249,640
Israel	6,229,748	1,607,974	6,325,339	1,753,183	7,051,162	1,835,839
Malaysia	503,912	64,101	433,042	79,825	415,042	78,298
South Africa, Republic of	19,500	50,355	117,316	71,178	89,718	53,388
Sri Lanka	374,532	96,844	608,774	95,938	1,244,669	211,220
Switzerland	198,640	36,970	272,015	56,414	507,073	144,882
Thailand	121,760	187,035	1,146,364	203,983	1,244,669	211,220
Tunisia	611,370	2,536	26,971	4,417	33,700	5,131
United Kingdom	4,994,308	457,268	4,513,043	528,574	5,003,377	578,951
United States	444,952	305,256	626,142	362,769	533,905	365,429
Unspecified	1,117,488	108,009	1,216,135	145,847	460,771	440,294
Total	85,093,719	4,552,420	80,359,616	4,925,435	100,954,525	5,842,745
Worked but not mounted or set:						
Germany	291,177	206,639	274,662	206,660	312,174	228,281
Hong Kong	628,371	522,620	767,866	608,939	828,602	539,027
Israel	343,104	239,861	400,191	270,355	526,382	342,204
Italy	183,623	92,023	236,920	119,463	311,296	148,354
Japan	442,993	535,531	454,846	610,170	527,585	691,432
Switzerland	369,696	287,190	500,650	397,461	615,554	472,952
Thailand	196,912	118,347	239,842	161,771	281,740	205,528
United Kingdom	223,098	185,254	196,729	226,120	189,034	263,017
United States	1,663,570	1,229,193	1,594,325	1,251,256	1,572,308	1,312,395
Unspecified	797,690	498,111	817,094	541,769	1,029,256	693,277
Total	5,140,234	3,914,769	5,483,125	4,393,964	6,193,931	4,896,467

Source: Diamond International, Nov.-Dec. 1996, No. 44, London, United Kingdom.

TABLE 5
BELGIUM: IMPORTS OF DIAMOND

Sources	1993		1994		1995	
	Quantity (carats)	Value (thousands)	Quantity (carats)	Value (thousands)	Quantity (carats)	Value (thousands)
Natural rough, unsorted, and sorted, unworked or simply sawn, cleaved, or bruted:						
Angola	712,724	135,281	689,443	132,687	562,665	152,948
Australia	7,932,624	53,214	9,245,275	58,016	9,158,490	62,680
Commonwealth of Independent States	1,404,919	48,470	1,201,056	65,253	4,802,359	131,856
Côte d'Ivoire	683,691	101,520	605,078	94,051	1,614,396	121,046
Israel	1,829,278	301,674	1,633,937	339,423	2,667,741	366,300
Liberia	5,006,234	290,143	3,268,982	394,106	10,677,708	757,338
Sierra Leone	344,626	79,637	526,743	107,134	455,062	88,277
Switzerland	1,447,859	153,544	369,134	58,108	635,814	127,618
United Kingdom	38,511,282	2,374,185	19,473,831	2,331,784	28,862,328	2,474,073
United States	1,572,907	138,508	1,279,561	127,275	963,080	103,847
Zaire	18,709,867	701,208	17,047,209	940,806	23,113,137	1,067,263
Unspecified	6,912,948	702,489	8,964,174	783,305	13,351,744	897,770
Total	85,068,959	5,079,873	64,304,423	5,431,948	95,864,524	6,351,016
Worked but not mounted or set:						
Commonwealth of Independent States	389,695	399,963	430,950	429,124	515,759	431,689
Germany	112,761	80,396	130,862	87,061	163,280	125,197
Hong Kong	301,396	178,502	304,382	207,782	276,698	188,375
India	1,754,266	560,059	1,888,913	605,959	2,076,986	724,182
Israel	468,803	463,780	460,859	482,312	458,301	474,617
South Africa, Republic of	109,185	142,333	81,236	120,849	87,648	136,855
Sri Lanka	247,229	113,874	232,328	108,575	240,111	114,283
Switzerland	131,777	165,732	105,704	204,182	193,787	255,256
Thailand	333,893	161,665	395,514	203,806	430,544	231,311
United Kingdom	118,300	132,571	108,101	149,830	103,003	195,419
United States	479,240	384,989	483,997	443,815	579,267	508,253
Unspecified	597,834	431,478	666,320	472,993	758,472	507,621
Total	5,044,379	3,215,342	5,289,166	3,516,288	5,883,856	3,893,058

Source: Diamond International, Nov.-Dec. 1996, No. 44, London, United Kingdom.

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

(Metric tons unless otherwise specified)

Commodity	1991	1992	1993	1994	1995 e/
Cement, hydraulic e/	687,786 3/	600,000 r/	620,000 r/	620,000	600,000
Gypsum and anhydrite, crude e/	400	400	400	400	400
Iron and steel, metal: Pig iron	2,463,000	2,256,000	2,411,000	1,927,000	2,000,000
Steel:					
Crude	3,379,440	3,068,463	3,293,000	3,092,000	2,613,000
Semimanufactures	3,787,000	3,590,000	3,650,000	3,620,000	3,650,000
Phosphates: Thomas slag:					
Gross weight	535,518	519,000	555,000 e/	472,000 e/	500,000
P ₂ O ₅ content e/	95,000	93,000	100,000	75,000	75,000

e/ Estimated. r/ Revised.

1/ Table includes data available through May 1996.

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 FOR 1995

(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) (SGB, 25%; Belgian Government, 31%; and others)	Plants at Differdange, Dudelange, Esch-Belval, and Esch-Schifflange	5,320