



2006 Minerals Yearbook

BELGIUM AND LUXEMBOURG

THE MINERAL INDUSTRIES OF BELGIUM AND LUXEMBOURG

By Harold R. Newman

BELGIUM

Belgium, a highly developed market economy, belongs to the Organization for Economic Cooperation and Development (a group of leading industrial countries) and is located at the heart of one of the world's most highly developed industrialized regions. Because it hosts few natural resources of its own, the country must import substantial quantities of raw materials and export a large volume of manufactures, which makes its economy unusually dependent on the state of world markets (World Group, 2006).

Minerals in the National Economy

Belgium's ferrous and nonferrous materials can be divided into the following three categories: base metals, such as aluminum, copper, lead, steel, and zinc; precious metals, such as gold, silver, and platinum; and specialty metals, such as cobalt, germanium, and indium. The country's total annual production of industrial minerals and building materials was estimated to be about 50 million to 60 million metric tons (Mt). Important producers of industrial minerals included SRC-Sibelco S.A., which was a world leader in silica sand production, and Carmeuse S.A., which was a world leader in the handling of limestone. Belgium was also a significant producer of cement (Mining Journal Online, 2006).

With exports equivalent to more than two-thirds of the gross domestic product (GDP), Belgium depends heavily on world trade. About three-quarters of Belgium's trade is with other European Union (EU) countries. In 2006, the trade with other EU countries accounted for \$300.2 billion in exports (76.8% of Belgium's total exports) and \$254.5 billion in imports (72% of Belgium's total imports). Germany was Belgium's top customer; the United States was ranked fifth (Belgium Foreign Trade Agency, 2007).

Industry, including minerals, accounted for 24% of the GDP. Exports of mineral products included but were not limited to mineral fuels, lubricants, and related materials (valued at \$28,413); petroleum and related products (\$18,985 million); diamond, other than industrial (\$15,604 million); metalliferous ore and metal scrap (\$3,417 million); copper (\$3,212 million); and aluminum (\$2,784 million). Imports of mineral products included but were not limited to mineral fuels, lubricants, and related materials (valued at \$47,722 million); petroleum and related products (\$30,500 million); diamond, other than industrial (\$13,948 million); metalliferous ore and metal scrap (\$7,498 million); aluminum (\$3,115 million); and copper (\$1,996 million) (United Nations, 2006).

Production

Mining was less important to the country's economy than in the past and, in 2006, mining was conducted only for industrial minerals. The refining of copper, minor metals, and zinc, and the production of steel were the leading mineral industries in Belgium. The country was also a producer of cadmium, cobalt, germanium, selenium, and tellurium. Belgium's well developed industrial minerals sector included the production of such industrial materials as carbonates and such construction materials as dolomite, limestone, and silica sand (table 1).

Structure of the Mineral Industry

The principal mining and mineral processing facilities in Belgium, with their locations and capacities, are listed in table 2. Most facilities were privately owned.

Commodity Review

Metals

Iron and Steel.—Arcelor S.A. and Mittal Steel N.V. announced that they had agreed on an improved bid for Arcelor (\$33.1 billion) by Mittal Steel that would create the world's first steel producer with a production capacity of more than 100 million metric tons per year (Mt/yr). A combination of the two companies would give Mittal control of an estimated 11% of the world's annual output. The combination would create a world leader three times larger than its nearest rival, Nippon Steel Corp. of Japan (Forbes, 2006).

Zinc.—N.V. Umicore S.A. was an international metals and materials producer. Its activities were centered on the following four business areas: advanced materials, precious metals products and catalysts, precious metals services, and zinc specialties. In late 2006, Umicore and Ziniflex Ltd. of Australia agreed to a merger that would create the world's leading zinc producer by combining their smelting assets. The proposed deal would result in a smelting and refining entity that would employ 4,500 people and produce 1.2 Mt/yr of metals and materials. That is equal to 10% of the global demand for zinc in 2006 (Mining Engineer, 2007).

Industrial Minerals

Diamond.—The diamond district of Antwerp, which comprised four exchanges and about 1,500 diamond companies, was a leading diamond distribution center. Belgium was the world's leading exporter of diamond and precious stones. In 2006, 8.7 million carats of polished diamond was exported

and 9.3 million carats of polished diamond was imported. The average per carat value of exports in 2006 was \$1,088, which was up from \$1,049 per carat in 2005. The United States remained the most important export market for cut diamond. The diamond sector accounted for 8% of Belgium's total exports. Eight in ten rough diamonds in the world are handled in Antwerp (Antwerp World Diamond Center, 2007).

Stone, Dimension.—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. A dark blue-gray crinoidal limestone, which is referred to as “petit granit,” was one of the most important facing stones that the country produced. All the marble quarries are located in the Walloon Region. Red, black, and gray are the principal color ranges of the marble, most of which was exported.

Mineral Fuels

Natural Gas.—N.V. Nederlands Gasunie and N.V. Nuon were to invest \$425 million in building a 180-million-cubic-meter salt cavern-natural gas storage facility at Zuidwending. Controlled salt mining would create four subterranean caverns in which the natural gas would be stored. The caverns would lie at a depth of between 1,000 meters (m) and 1,500 m so that the gas would be stored more than 1,000 m below the surface. Natural gas has been stored in neighboring countries for many years (Platts, 2006).

The European Commission issued formal antitrust charges against Distrigas. The company was accused of abusing its dominant position in the Belgium gas market by locking in industrial customers through long-term gas supply contracts that shut out competitors. The charges could lead to fines of up to 10% of the group's global annual sales. Distrigas is part of Suez SA (the French energy group) and controls about 85% of the Belgium gas market (Financial Times, 2006).

Outlook

Belgium is expected to remain a significant mineral processor and major diamond trader in the world, as well as a globally significant handler of mineral products through its major ports. The four ports in Flanders (Antwerp, Ghent, Ostend, and Zeebrugge), which are all located within 100 kilometers of each other, are leading players in international and intra-European cargo handling. The seaport of Antwerp is a particularly important link in the chain of international trade. Antwerp is the 2d ranked cargo-handling port in Europe after Rotterdam and the 4th ranked cargo-handling port in the world; it is also the world's leading port for steel products and the world's 10th ranked port for container traffic.

References Cited

- Antwerp World Diamond Center, 2007, Key figures—Polished diamonds: Antwerp, Belgium, Antwerp World Diamond Center. (Accessed January 31, 2007, at <http://www.hrd.be/index.php?id=51>.)
- Belgium Foreign Trade Agency, 2007, Belgium—Breakdown of trade by continents in 2006, Belgium Foreign Trade Agency. (Accessed July 25, 2007, at http://www.abh-ace.org/import_en/infor-center/trade-statistics/world-trade/belgium-wt_en.html.)

- Financial Times, 2006, EC antitrust charges hit Distrigas: Financial Times, May 15. (Accessed May 17, 2006, at <http://www.news.moneycentral.msn.com/printarticle.asp>.)
- Forbes, 2006, Mittal, Arcelor agree on new bid: Forbes, April 4. (Accessed April 17, 2007, at <http://www.forbes.com/markets/feeds/afx/2006/04/11/afx2662850.html>.)
- Mining Engineer, 2007, Ziniflex and Umicore to merge: Mining Engineer, January, v. 59, no. 1, p. 23.
- Mining Journal Online, 2006, Countries and commodities reports—Belgium: Mining Journal Online. (Accessed January 29, 2007, at http://www.mining-journal.com/registered/Annual_Review_Article.aspx.)
- Platts, 2006, Gasunie, Nuon to invest \$425 million in new Groningen salt caverns: Platts, January 16. (Accessed January 19, 2006, at <http://www.platts.com/natural%20gas/news/8247986.xml>.)
- United Nations, 2006, Belgium Comtrade: United Nations. (Accessed June 18, 2008, at <http://comtrade.un.org/pb/countrypages.aspx?y=2006>.)
- World Group, 2006, Belgium business guide: World Group. (Accessed July 24, 2007, at <http://www.worldgroup.com/countries.asp?c=be&country=Belgium>.)

LUXEMBOURG

Minerals in the National Economy

In 2006, Luxembourg's mineral industry comprised mainly mineral information systems, mineral trading, and raw materials processing. A member of the Belgium-Luxembourg Economic Union (BLEU), Luxembourg's trade statistics 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.

Production

Mining in Luxembourg was represented by small industrial mineral operations that produced material solely for domestic consumption. The minerals produced included dolomite, limestone, sand and gravel, and slate. Information on these operations was not readily available. Other commodities are listed in table 1.

Structure of the Mineral Industry

The principal mineral processing facilities in Luxembourg, with their locations and capacities, are listed in table 2. Most facilities were privately owned.

Commodity Review

Metals

Iron and Steel.—Acieries Reunies de Burbach-Eich-Dudelang (ARBED) dominated the country's mineral industry. ARBED was the major producer of crude steel, pig iron, and stainless steel, all of which were produced from imported material (Arcelor Group, 2006).

Arcelor Differdange SA, a world leader in the production of heavy steel sections, chose Danieli Morgardshammar Corp. for the major modification and modernization of its mill in Differdange, with the aim of enhancing plant operation, efficiency, and final product quality. The mill's product range

included parallel-flange beams rolled in up to 120-meter lengths. Danieli's order, awarded in February 2006, will involve the complete rearrangement of the intermediate/prefinishing rolling mill area (Danieli Morgardshammar Corp., 2006).

Outlook

Luxembourg is expected to continue to be a producer and exporter of steel. The industrial mineral production will be limited to domestic consumption.

References Cited

Arcelor Group, 2006, Annual report: Arcelor Group. (Accessed September 1, 2007, at <http://www.arcelor.com/index.php?lang=en&page=144>.)
 Danieli Morgardshammar Corp., 2006, Danieli to upgrade 1,100-mm beam mill at Arcelor Differdange, Luxembourg: Danieli Morgardshammar Corp. (Accessed July 28, 2006, at http://www.danielicorp.com/Danieli_Morgardshammar/Danieli_Morgard_News/danielimorgardshammarnews.htm.)

TABLE 1
 BELGIUM AND LUXEMBOURG: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Country and commodity	2002	2003	2004	2005	2006 ^c
BELGIUM²					
Metals:					
Aluminum, secondary, including unspecified metals ^c	300 ^r	200 ^r	100 ^r	100 ^r	125
Arsenic, white ^c	1,500	1,200	1,200	-- ^r	--
Bismuth, metal ^c	700	600	500	500	500
Cadmium, primary	117 ^c	100	--	--	100
Cobalt, primary ³	1,135	1,704	2,947	3,298	2,840
Copper:					
Smelter, secondary	125,900	117,500	107,700 ^r	97,200	114,600 ⁴
Refined, primary and secondary ^c	423,000	425,000	383,000	382,000	382,600 ⁴
Iron and steel:					
Pig iron	7,988 ^r	7,813 ^r	8,224 ^r	7,254 ^r	8,000
thousand metric tons					
Steel:					
Crude	11,495	11,128	11,698	8,906 ^r	11,238 ⁴
Hot-rolled products	13,490 ^r	13,169 ^r	13,269 ^r	11,274 ^r	12,000
Lead, refined, secondary	88,000	69,800 ^r	63,400 ^r	63,400	97,200
Selenium ^c	200	200	200	200	200
Tin, metal, secondary, including alloys	8,900	7,700	8,900	7,800	7,600
Zinc:					
Slab:					
Primary	239,000	244,000	257,000	222,000	219,800 ⁴
Secondary, possibly remelted zinc	70,000 ⁴	42,000	46,000	40,000	40,000
Total	309,000	286,000	303,000	262,000	260,000
Powder	25,000	20,000	20,000	20,000	20,000
Industrial minerals:					
Barite ^c	30	30	27	27	28
Cement	8,152	7,469	7,379	7,594 ^r	8,192 ⁴
Clay, kaolin ^c	411	429	459	460 ^c	460
Lime and dead-burned dolomite, quicklime ^c	1,800	1,800	2,400 ^r	2,300 ^r	2,400
Nitrogen, N content of ammonia	842	874	857	890 ^r	825 ⁴
Sodium sulfate ^c	250	250	250	250	250
Stone:					
Worked monumental/building stone and articles thereof; in marble; travertine and alabaster excluding tiles; cubes/similar articles; largest surface less than 7 square meters; setts; kerbstones; flagstones	24,801	23,734	21,649	21,188	18,798 ⁴
Natural stone setts; kerbstones and flagstones (excluding slate)	361,920	375,122	399,246	460,206	336,584 ⁴
Sulfur:					
Byproducts:^c					
Elemental	225,000	225,000	225,000	225,000	225,000
Other forms	175,000	175,000	175,000	175,000	175,000
Total	400,000	400,000	400,000	400,000	400,000
Sulfuric acid	1,477 ^r	1,235 ^r	1,332 ^r	1,332 ^r	1,393 ⁴
thousand metric tons					

See footnotes at end of table.

TABLE 1—Continued
 BELGIUM AND LUXEMBOURG: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Country and commodity	2002	2003	2004	2005	2006 ^c
BELGIUM²—Continued					
Mineral fuels and related materials:					
Carbon black ^e thousand metric tons	1,000	1,000	1,000	1,000	1,000
Coke, all types do.	2,967	3,200 ^e	3,200 ^e	2,599 ^r	2,650 ⁴
Gas, manufactured thousand cubic meters	339,807	340,000 ^e	340,000 ^e	472,478 ^r	425,504 ⁴
Petroleum refinery products:⁵					
Liquefied petroleum gas thousand 42-gallon barrels	15,537 ^r	15,605 ^r	12,304 ^r	10,669 ^r	10,247 ⁴
Naphtha and white spirit do.	18,497 ^r	21,908 ^r	20,540 ^r	14,531 ^r	11,158 ⁴
Gasoline do.	57,753 ^r	58,654 ^r	57,894 ^r	50,562 ^r	53,570 ⁴
Kerosene do.	96,594 ^r	100,849 ^r	95,533 ^r	13,005 ^r	13,512 ⁴
Kerosene, other do.	-- ^r	-- ^r	-- ^r	500 ^r	326 ⁴
Distillate fuel oil do.	-- ^r	-- ^r	-- ^r	89,056 ^r	94,443 ⁴
Refinery gas do.	-- ^r	-- ^r	-- ^r	3,682 ^r	3,864 ⁴
Residual fuel oil do.	50,639 ^r	57,872 ^r	55,811 ^r	53,563 ^r	47,472 ⁴
Bitumen do.	2,628 ^r	2,018 ^r	5,331 ^r	6,523 ^r	8,520 ⁴
Total do.	218,673 ^r	233,581 ^r	226,461 ^r	227,122 ^r	227,635 ⁴
LUXEMBOURG					
Metals, steel:					
Crude thousand metric tons	2,736	2,675	2,684	2,194	2,802 ⁴
Hot-rolled products do.	2,921 ^r	2,720 ^r	2,801 ^r	2,564 ^r	2,800
Industrial minerals:					
Cement, hydraulic ^e	700,000	700,000	700,000	700,000	700,000
Phosphates, Thomas slag: ^e					
Gross weight	475,000	475,000	475,000	475,000	475,000
P ₂ O ₅ content	70,000	70,000	70,000	70,000	70,000

^cEstimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. ^rRevised. -- Zero.

¹Table includes data available through May 2008.

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

³Production reported by n.v. Umicore s.a. includes production from China and South Africa.

⁴Reported figure.

⁵Conversion factors for petroleum refinery products, in 42-gallon barrels per metric ton, are as follows: liquefied petroleum gas—11.6; naphtha and white spirit—8.5; gasoline—10; kerosene—7.75; distillate fuel oil—7.46; refinery gas—8.04; residual fuel oil—6.66; and bitumen—6.06.

TABLE 2
BELGIUM AND LUXEMBOURG: STRUCTURE OF THE MINERAL INDUSTRIES IN 2006

(Thousand metric tons unless otherwise specified)

Country and commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
BELGIUM				
Cadmium, metal	metric tons	N.V. Umicore S.A. (Sté. Générale de Belgique, 50.2%)	Balen	1,800
Cement		Major companies:	Plants:	8,400
Do.		Cimenteries CBR SA (Heidelberg Group)	Major plants at Lixhe, Mons/Obourg, Harmignies, Marchienne, and Ghent	3,200
Do. ¹		Ciments d'Obourg SA (Holcim Group)	Plants at Obourg and Thieu	2,800
Do.		Compagnie des Ciment Belge (Ciments Français)	Plant at Gaurain-Ramecroix	2,400
Cobalt	metric tons	N.V. Umicore S.A. (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 Nameche	3,000
Do.		do.	Plant at Nameche	3,000
Do.		SA Dolomies de Merlemont (Group Lhoist)	Quarry at Philippeville	100
Lead, metal		N.V. Umicore S.A. (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	Total S.A.	Refinery at Antwerp	268,000
Do.	do.	SA Esso NV	do.	239,000
Do.	do.	Nynas Petroleum NV	do.	125,000
Do.	do.	Belgian Refining Corp.	do.	80,000
Do.	do.	Petroplus Refining Antwerp NV	do.	55,000
Salt		Zoutman NV	Plant at Roeselare	200
Sand, silica		SRC-Sibelco SA	Mines and plants at Lommel, Mol, and Maasmechelen	500
Steel		Companies:	Of which:	14,000
		Cockerill Sambre SA (Government of Wallonia, 80%)	Plants at Liege and Charleroi	(5,000)
Do.		Sidmar NV (Belgian Government 28.24%, and Arcelor Group, 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 Belgium NV	Plant at Genk-Zuid	(360)
Do.		New Tubemeuse (NTW) SA	Plant at Flemalle	(300)
Zinc, metal		N.V. Umicore S.A. (Sté. Générale de Belgique, 50.2%)	Smelter and refinery at Balen	450
LUXEMBOURG				
Cement		SA des Ciments Luxembourgeois (Acieries Reunies de Burbach-Eich-Dudelang, 50.2%, and Sté. Générale de Belgique, 25%)	Plant at Esch-sur-Alzette	450
Do.		Intermoselle SARL (Acieries Reunies de Burbach-Eich Dudelang, 33%)	Plant at Rumelange	1,000
Steel		Acieries Reunies de Burbach-Eich-Dudelang (Arcelor Group)	Plants at Differdange, Dudelange, Esch-Belval, Esch-Schifflange	5,320
Do.		Arcelor Differdange SA (Arcelor Group)	Plant at Differdange	1,200
Do.		Ugine & ALZ Carnox (Arcelor Group)	do.	1,000

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