



2012 Minerals Yearbook

BELGIUM AND LUXEMBOURG

THE MINERAL INDUSTRIES OF BELGIUM AND LUXEMBOURG

By Alberto Alexander Perez

BELGIUM

Belgium was not a significant mineral producer, but it was a significant mineral processor and metals manufacturer. In 2011 (the latest year for which data were available), Belgium produced about 5.7% of the total world production of zinc. Belgium also produced 4.3% of the crude steel output in the European Union (EU) and 2.6% of the EU's cement production. It was also a significant cobalt producer, although available information was not sufficient to determine what percentage of EU or world output Belgium produced (Tolcin, 2013, p. 84.11; van Oss, 2013, p. 16.30–16.33; World Steel Association, 2013, p. 1).

In 2012, Belgium's gross domestic product (GDP) was \$484.7 billion, which was a 0.2% decrease in real GDP compared with that of the previous year. The largest share of Belgium's GDP in 2012 was accounted for by services (77%) followed by industry (22.3%) and agriculture (0.7%) (U.S. Central Intelligence Agency, 2013).

Belgium's economy depended considerably on trade in goods and services, both for domestic consumption and for reexport. Belgium traded mostly with its EU partners; 70% of all Belgian exports went to EU members, and 67.6% of its imports came from EU members. Its main trading partners in 2012 were, in order of value, Germany, which accounted for 18% of Belgium's total exports and 14.2% of its imports; France, 16.1% of exports and 10.6% of imports; the Netherlands, 13% of exports and 20.9% of imports; the United Kingdom, 7.3% of exports and 5.5% of imports; the United States, 5.3% of exports and 6.1% of imports; Italy, 4.4% of exports; and Ireland, 4.4% of imports (European Commission, 2014e, f).

In 2012, Belgium exported \$17.4 billion and imported \$29.4 billion worth of goods and services to and from the United States, respectively. The traded goods were principally chemicals, machinery, miscellaneous manufactured goods, petroleum and coal products, and transportation equipment (U.S. Census Bureau, 2014a, b).

With respect to mineral commodity trade among EU countries and non-EU countries, Belgium received 2.9% of the EU's total imports of mineral fuels, lubricants, and related materials and supplied 9.2% of the EU's exports of these materials. Belgium also received 7.6% of the EU's imports of raw materials and supplied 5.6% of the EU's raw materials exports (European Commission, 2014a–d).

Belgium is a participant in the Benelux customs union, along with Luxembourg and the Netherlands. The Benelux customs union is an economic union aimed at reinforcing cross-border economic and legislative cooperation among the three countries (Benelux Parlement, 2014).

Minerals in the National Economy

Trading of diamond and the processing of metals were primary mineral industries in Belgium. The country had no economically exploitable reserves of coal or metallic ores in 2012.

Belgium imported substantial quantities of raw materials, and the metal processing industries, particularly steelmaking, were significant to the Belgian economy. Belgium was the 21st-ranked steel producer in the world and the 8th-ranked producer in the EU in 2012, measured by production tonnage. The country produced 7.4 million metric tons (Mt) of steel in 2012 compared with 8 Mt in 2011 (World Steel Association, 2013, p. 8–9).

Umicore S.A. was one of Europe's leading metal recyclers and processors; it had major facilities in Hoboken, Belgium, and was headquartered in Brussels. Nyrstar N.V. was a leading producer of zinc, by volume, in the world; it was headquartered in Balen, Belgium (Nyrstar N.V., 2013a, p. 52; Umicore S.A., 2013).

According to the Antwerp World Diamond Centre, Antwerp was the center of the world's open rough diamond market. Antwerp hosts 1,850 diamond companies and 4,500 diamond dealers, and about 10,000 people worked in the industry in the city (Antwerp World Diamond Centre, 2013a).

Production

In 2012, Belgium's production of cobalt increased by 32%, whereas production of pig iron decreased by 14% and zinc, by 11%. Only industrial minerals were mined. The refining of copper, minor metals (cadmium, cobalt, germanium, selenium, tellurium, and tin, among others), and zinc and the production of steel were the leading mineral processing industries in Belgium (table 1).

Structure of the Mineral Industry

Most facilities were privately owned either by Belgian companies or other EU companies. Among the most significant companies operating were Umicore, which had a catalysis division, an energy materials division, a performance materials division, and a recycling division in Belgium (as well as about another 76 industrial centers and 20 research centers throughout the world); and Nyrstar, which operated the Balen zinc smelter and the Overpelt plant and zinc alloy facility. Nyrstar also owned smelters in Aubry, France; Budel, Netherlands; Clarksville, Tennessee; and Hobart and Port Pirie, Australia. The principal mining and mineral processing facilities in Belgium, with their locations and capacities, are listed in table 2 (Nyrstar N.V., 2013b; Umicore S.A., 2013).

Commodity Review

Metals

Iron and Steel.—In June 2012, ArcelorMittal reported that it had implemented a system for waste flue gas recovery at its plant in Ghent for the purpose of reducing emissions and lowering energy costs, as the gas recovered was used within the mill or sent to a local electricity generator. ArcelorMittal Gent estimated that by implementing the waste recovery system, the plant would reduce its energy consumption by 3% and reduce its CO₂ emissions by an equivalent of 170,000 metric tons per year (ArcelorMittal, 2012).

Zinc.—Nyrstar reported that production at the Balen smelter returned to normal in the second half of 2012 following a decrease in production during the first half of the year. In the first half of the year, production at the smelter was affected by a Belgian national industrial action and by an unplanned shutdown in the first quarter of 2012. In the second half of 2012, however, zinc metal production at the plant increased by 8% compared with production in the first half of 2011. Even so, zinc production for the full year 2012 ended 11% lower than that of the previous year (Nyrstar N.V., 2013a, p. 66).

Industrial Minerals

Gemstones.—The amount of Belgium's exports of polished diamond decreased by 18.91% compared with that of the previous year, and the value of these exports decreased by 17.63% to \$997.9 million. The average price per carat of exported diamond was \$1,866 in December 2012 (Antwerp World Diamond Centre, 2013b).

Mineral Fuels

Natural Gas and Petroleum.—The Antwerp Terminal and Processing Co. (ATPC), which was owned by Vitol Tank Terminals B.V. (VTTI) through its subsidiary Eurotank Belgium B.V. [part of the Vitol Group (Vitol)], announced plans to expand its capacity after achieving positive results for the first 15 months following its acquisition by VTTI. This expansion would increase the company's storage capacity by 500,000 cubic meters; no date was given as to when the capacity expansion would be completed (Vitol Tank Terminals B.V., 2011).

Outlook

Belgium's role as a leading mineral processor and major diamond trader is expected to continue, although its steel production is likely to decrease as a result of decreased demand. Belgium is also expected to remain significant in international and intra-European cargo handling of mineral products through its major ports (Antwerp, Ghent, Ostend, and Zeebrugge).

References Cited

Antwerp World Diamond Centre, 2013a, History: Antwerp World Diamond Centre. (Accessed July 14, 2013, at <http://www.awdc.be/en/history>.)

- Antwerp World Diamond Centre, 2013b, Rough import and export figures show increase compared to December 2011: Antwerp World Diamond Centre. (Accessed November 30, 2012, at <http://www.awdc.be/en/news?type=6>.)
- ArcelorMittal, 2012, Gent and Bremen cut 270,000 tonnes of emissions with gas recovery projects: ArcelorMittal news release, June. (Accessed July 22, 2013, at <http://corporate.arcelormittal.com/news-and-media/news/2012/jun/20-06-2012>.)
- Benelux Parlement, 2014, What is Benelux: Brussels, Benelux Parlement. (Accessed August 5, 2014, at http://www.benelux-parlement.eu/en/benelux/benelux_intro.asp.)
- European Commission, 2014a, Extra-EU28 trade of mineral fuels, lubricants and related materials (SITC 3), by member state—Share of exports by member state (%): European Commission. (Accessed August 5, 2014, via <http://epp.eurostat.ec.europa.eu/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=tet00056&language=en>.)
- European Commission, 2014b, Extra-EU28 trade of mineral fuels, lubricants and related materials (SITC 3), by member state—Share of imports by member state (%): European Commission. (Accessed August 5, 2014, via <http://epp.eurostat.ec.europa.eu/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=tet00056&language=en>.)
- European Commission, 2014c, Extra-EU28 trade of raw materials (SITC 2+4), by member state—Share of exports by member state (%): European Commission. (Accessed August 5, 2014, via <http://epp.eurostat.ec.europa.eu/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=tet00064&language=en>.)
- European Commission, 2014d, Extra-EU28 trade of raw materials (SITC 2+4), by member state—Share of imports by member state (%): European Commission. (Accessed August 5, 2014, via <http://epp.eurostat.ec.europa.eu/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=tet00064&language=en>.)
- European Commission, 2014e, Share of trade with the EU28—Share of exports to EU in total exports (%): European Commission. (Accessed August 5, 2014, via <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&plugin=1&language=en&pcode=tet00036>.)
- European Commission, 2014f, Share of trade with the EU28—Share of imports from EU in total imports (%): European Commission. (Accessed August 5, 2014, via <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&plugin=1&language=en&pcode=tet00036>.)
- Nyrstar N.V., 2013a, Annual report 2012: Nyrstar N.V., 210 p. (Accessed July 24, 2013, at http://www.nyrstar.com/_layouts/download.aspx?SourceUrl=/investors/en/Nyr_Documents/English/Nyrstar_Annual_Report_2012_EN.pdf.)
- Nyrstar N.V., 2013b, Smelting—Operational review: Nyrstar N.V. (Accessed July 14, 2013, <http://www.nyrstar.com/operations/pages/smeltng.aspx>.)
- Tolcin, A.C., 2013, Zinc, *in* Metals and minerals: U.S. Geological Survey Minerals Yearbook 2011, v. I, p. 84.1–84.12. (Revised June 27, 2014.) (Accessed October 1, 2014, at <http://minerals.usgs.gov/minerals/pubs/commodity/zinc/index.html#myb>.)
- Umicore S.A., 2013, Fact sheet—Umicore S.A.: Umicore S.A. (Accessed July 24, 2013, at <http://tools.euroland.com/factsheet/b-unim/factsheethtml.asp>.)
- U.S. Census Bureau, 2014a, U.S. exports to Belgium by 5-digit end-use code: U.S. Census Bureau. (Accessed August 5, 2014, at <https://www.census.gov/foreign-trade/statistics/product/enduse/exports/c4231.html>.)
- U.S. Census Bureau, 2014b, U.S. imports to Belgium by 5-digit end-use code: U.S. Census Bureau. (Accessed August 5, 2014, at <https://www.census.gov/foreign-trade/statistics/product/enduse/imports/c4231.html>.)
- U.S. Central Intelligence Agency, 2013, Belgium, *in* The world factbook: U.S. Central Intelligence Agency. (Accessed July 24, 2013, at <https://www.cia.gov/library/publications/the-world-factbook/geos/be.html>.)
- van Oss, H.G., 2013, Cement, *in* Metals and minerals: U.S. Geological Survey Minerals Yearbook 2011, v. I, p. 16.1–16.33. (Revised June 2013.) (Accessed October 2, 2014, at <http://minerals.usgs.gov/minerals/pubs/commodity/cement/index.html#myb>.)
- Vitol Tank Terminals B.V., 2011, ATPC—The first 15 months: VTTI News. (Accessed November 30, 2012, at http://www.vtti.com/news_01.php?id=56.)
- World Steel Association, 2013, World steel in figures 2013: Brussels, Belgium, World Steel Association, 30 p. (Accessed July 24, 2013, at http://www.worldsteel.org/dms/internetDocumentList/bookshop/WSIF_2013_spreads/document/WSIF_2013_spreads.pdf.)

LUXEMBOURG

In 2012, the iron and steel industry was Luxembourg's most economically important mineral industry, and steel was the country's main export commodity. Because it is a member of the Belgium Luxembourg Economic Union (BLEU), trade statistics for Luxembourg are inextricably linked with those of Belgium and, therefore, cannot be listed individually.

Production

Mining in Luxembourg consisted of small industrial mineral operations that produced mineral commodities only for domestic consumption. These minerals included dolomite, limestone, sand and gravel, and slate. Information on these operations was not readily available. Production data are in table 1.

Structure of the Mineral Industry

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

Commodity Review

Metals

Iron and Steel.—ArcelorMittal, which was headquartered in Luxembourg, was the world's leading steel manufacturer. It

was more than two times larger, in terms of production quantity, than its nearest rival, Hebei Group of China (World Steel Association, 2013, p. 8).

ArcelorMittal Belval & Differdange S.A. agreed to revamp the Belval electric arc furnace (EAF) to increase the plant's production capacity and lower maintenance costs in Esch-sur-Alzette. This furnace, which was commissioned in 1997, would be refitted with a new lower shell, a new tilting frame, and a renewed upper shell. The revamping of the EAF would require the plant to be shut down for 2 weeks. Operations were expected to restart in March 2013, and the revamped furnace was expected to be commissioned in April 2013 (ArcelorMittal, 2012).

Outlook

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

References Cited

- ArcelorMittal, 2012, ArcelorMittal invests €6m in Belval: ArcelorMittal news release, October 23. (Accessed July 23, 2013, at <http://corporate.arcelormittal.com/news-and-media/news/2012/oct/19-10-2012a>.)
- World Steel Association, 2013, World steel in figures: Luxembourg, World Steel Association, 28 p.

TABLE 1
BELGIUM AND LUXEMBOURG: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Country and commodity	2008	2009	2010	2011	2012 ^e
BELGIUM²					
Metals:					
Cobalt, primary ³	3,020	2,150 ^e	2,600 ^e	3,187	4,200 ⁴
Copper:					
Smelter, secondary	115,900	117,400	118,600	147,000	147,000
Refined, primary and secondary	395,800	373,700	381,000	380,000	380,000
Iron and steel:					
Pig iron thousand metric tons	7,125	3,087	4,688	4,725	4,072 ⁴
Steel:					
Crude do.	10,676	5,635	7,973	8,026	7,386 ⁴
Hot-rolled products do.	11,792	7,172	9,649	10,012	9,800
Lead, refined, secondary	80,966	109,000	105,000 ^e	88,129	87,958 ⁴
Zinc:					
Slab:					
Primary	239,000 ^e	14,000	260,000	282,000	250,000 ⁴
Secondary, possibly remelted zinc ^e	40,000	40,000	40,000	40,000	40,000
Total	279,000 ^e	54,000	300,000	322,000	290,000
Powder ^e	20,000	20,000	20,000	20,000	20,000
Industrial minerals:					
Barite	-- ^r	-- ^r	-- ^r	-- ^r	-- ^r
Cement thousand metric tons	6,969	6,113	5,990	6,844	6,800
Nitrogen, N content of ammonia do.	830	830	830	830	830
Sulfur:^e					
Byproducts:					
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
Mineral fuels and related materials:					
Carbon black	-- ^r	-- ^r	-- ^r	-- ^r	-- ^r
Coke, all types thousand metric tons	2,545 ^r	1,735 ^r	2,133 ^r	2,120 ^r	2,100
Gas, manufactured thousand cubic meters	463,000	463,000	463,000	463,000	463,000
Petroleum refinery products:					
Liquefied petroleum gas thousand 42-gallon barrels	5,946	5,289	6,205	6,200 ^e	6,200
Naphtha and white spirit do.	14,300 ^e	14,300 ^e	14,300 ^e	NA	NA
Gasoline do.	34,257	32,338	30,186	30,100 ^e	30,100
Kerosene do.	14,758	16,294	15,950	15,900 ^e	15,900
Kerosene, other do.	283	466	511	510 ^e	510
Distillate fuel oil do.	96,425	88,289	93,075	93,000 ^e	93,000
Refinery gas do.	3,800 ^e	3,800 ^e	3,800 ^e	NA	NA
Residual fuel oil do.	43,701	34,432	35,150	35,100 ^e	35,100
Bitumen do.	8,600 ^e	8,600 ^e	8,600 ^e	NA	NA
Total do.	222,070	203,800	207,800	180,000	180,000
LUXEMBOURG					
Metals, steel:					
Crude thousand metric tons	2,582	2,215	2,563	2,521	2,232 ⁴
Hot-rolled products do.	2,837	2,910	1,941	2,220	2,000
Industrial minerals:					
Cement, hydraulic	1,091,000	1,000,000 ^e	1,078,000	1,319,000	1,217,000 ⁴
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

^eEstimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. ^rRevised. NA Not available. do. Ditto. -- Zero.

¹Table includes data available through April 11, 2014.

²In addition to the commodities listed, Belgium produced a number of other metals, alloys, and industrial minerals, such as secondary aluminum, bismuth metal, kaolin, lime and dead-burned dolomite, quicklime, selenium, sodium sulfate, sulfuric acid, secondary tin metal, and worked and natural stone, 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.

TABLE 2
BELGIUM AND LUXEMBOURG: STRUCTURE OF THE MINERAL INDUSTRIES IN 2012

(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	Umicore S.A./N.V.	Hoboken	1,800
Cement		Major companies, of which:	Plants, of which;	8,400
Do.		Cimenteries CBR SA (Heidelberg Cement Group)	Major plants at Lixhe, Mons/Obourg, Harmignies, and Ghent	(3,200)
Do.		Ciments d'Obourg SA (Holcim Group)	Plant at Obourg	(2,800) ¹
Do.		Compagnie des Ciment Belge (Ciments Francais S.A.)	Plant at Gaurain-Ramecroix	(2,400)
Cobalt	metric tons	Umicore S.A./N.V.	Refinery at Olen	500
Copper, secondary		Metallo-Chimique NV (Metallum Group)	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		Umicore S.A./N.V.	Smelter at Antwerp-Hoboken	90
Do.		do.	Refinery at Antwerp-Hoboken	125
Limestone		Carmeuse S.A. (privately owned)	Mines and plant at Engis	1,850
Do.		do.	Mines and plant at Frasnès	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.	ExxonMobil Petroleum & Chemical B.V.B.A. (Exxon Mobil Corp., 100%)	do.	239,000
Do.	do.	Antwerp Processing Co. (Vitol Group)	do.	125,000
Do.	do.	Belgian Refining Corp. (Guvnor Group)	do.	107,500
Do.	do.	PRA NV (Vitol Group)	do.	22,300
Salt		Zoutman NV	Plant at Roeselare	200
Sand, silica		SRC-Sibelco SA	Mines and plants at Lommel, Mol, and Maasmechelen	500
Steel:				
Crude		Various companies:	Of which:	
Do.		ArcelorMittal Liege (ArcelorMittal)	Plant at Liege	3,000
Do.		ArcelorMittal Gent (ArcelorMittal)	Plant at Ghent	3,000
Do.		NLMK La Louviere S.A. (NLMK Group)	Plant at La Louviere	900
Manufactured		Various companies:	Of which:	
Do.		NMLK Clabecq S.A. (NLMK Group)	Rolling mill at Clabecq	750
Do.		Industeel Belgium S.A. (ArcelorMittal)	Rolling mill at Charleroi	600
Do.		ArcelorMittal Genk (ArcelorMittal)	Galvanizing Plant at Genk-Zuid	360
Do.		Tubemeuse Industries S.A.	Tube mill at Flemalle	50
Tin		Metallo-Chimique NV (Metallum Group)	Smelter at Beerse	12
Zinc, metal		Nyrstar N.V.	Smelter and refinery at Balen/Overpelt	252
LUXEMBOURG				
Cement		Cimalux S.A. (Dyckerhoff AG)	Grinding plant at Esch-sur-Alzette	850
Do.		do.	Clinker plant at Rumelange	1,000
Steel		ArcelorMittal Belval and Differdange S.A. (ArcelorMittal)	Plants at Differdange, Esch-Belval, and Esch-Schifflange	5,320

Do., do. Ditto.

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