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2013 Minerals Yearbook

BELGIUM AND LUXEMBOURG

U.S. Department of the Interior
U.S. Geological Survey

December 2016

The Mineral Industries of Belgium and Luxembourg

By Alberto Alexander Perez

BELGIUM

In 2013, Belgium was not a significant world producer of minerals. The country, however, was a significant processor of minerals in the European Union (EU), processing cobalt, primary and secondary copper, lead, pig iron, steel, and zinc. Belgium also produced industrial minerals and petroleum refinery products, and Antwerp was the leading trading center for the diamond industry in the world (table 1).

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 cooperation among the three countries (Benelux Parlement, 2014).

Belgium's economy depended considerably on trade, both for domestic consumption and for exporting goods and services from its industry. Within the EU, Belgium received 3.8% of all the EU's imports of mineral fuels, lubricants, and related materials, and it accounted for 12.9% of all EU exports to countries outside the EU. Belgium also accounted for 7.5% of imports and 5.3% of exports of raw materials from the EU. Belgium traded mostly with its EU partners, with 70.1% of all Belgian exports going to EU members, and 66.3% of its imports coming from EU members. In 2013, trade between Belgium and the United States amounted to $19.1 billion in imports and $31.9 billion in exports, principally as chemicals, machinery, miscellaneous manufactured goods, petroleum and coal products, and transportation equipment (European Commission 2014a–f; U.S. Census Bureau, 2014).

Minerals in the National Economy

The metal processing industries, and in particular steel production, were significant to the Belgian economy. Belgium was the 22d-ranked steel producer in the world in 2013, measured by volume of production (World Steel Association, 2014, p. 9).

Umicore Group, which was one of Europe's leading metal recyclers and processors, was headquartered in Hoboken, Belgium. Nyrstar N.V., which was headquartered in Balen, Belgium, was a leading producer of zinc, by volume, in the world (Umicore Group, 2013; Nyrstar N.V., 2014, p. 52).

According to the Antwerp World Diamond Centre, Antwerp was the center of the world's open rough diamond market; 84% of all rough diamond and 50% of all polished diamond pass through Antwerp. Diamond represented 5% of all Belgian exports worldwide and 15% of all Belgian exports outside the EU in 2013 (Antwerp World Diamond Centre, 2014).

According to the Environment, Nature and Energy Department of the Flemish region, Flanders produces principally industrial minerals, such as clay, loam, and sand and gravel, and these industrial minerals are the only mineral resources that are exploited and commercialized in the Flemish region. The mineral extraction industry in Flanders employed directly about 3,500 people (Flemish Department of Environment, Nature and Energy, 2014).

Government Policies and Programs

Belgium is a federal state with a Federal legislature, divided into three geographic regions and three linguistic communities, all with their respective legislatures. Flanders is the sole exception within this legal framework where the two levels of Government (the Flemish language community and the Flemish regional legislature) united in 1980. Since 1980, general laws regarding mineral exploitation and administration have been administered under the legislative powers of each region. These regions are Flanders (Vlaanderen), Wallonia (Wallonie), and the Brussels-Capital Region. The main mining law dates from 1810 with modifications in 1914, 1920, and 1929. In 1980, each region became responsible for its own mineral resources, and each region has its own laws and regulations regarding concessions, exploitation, and all matters related to mineral exploitation and extraction (European Union, 2014; Service Géologique de Wallonie, 2014).

Production

In 2013, Belgium mined only industrial minerals. 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 industries in Belgium (table 1).

Structure of the Mineral Industry

Belgium had cement plants, petroleum refineries, and steel mills, making Belgium an important processor of raw mineral materials. Although the country's industrial production has shifted from manufactured goods to a service economy, minerals processing and manufacturing still remain relevant to the Belgian economy.

The principal mining and mineral processing facilities in Belgium, with their locations and capacities, are listed in table 2. Most facilities were privately owned either by Belgian companies or other EU companies. Of these companies, Umicore and Nyrstar, in terms of value of production, are the most prominent. Umicore had a catalysis division, an energy materials division, a performance materials division, and a recycling division. Nyrstar operated the Balen/Overpelt smelter

and zinc alloy facility. Nyrstar also owned smelters in Auby, France; Budel, Netherlands; Clarksville, Tennessee; and Hobart and Port Pirie, Australia (Umicore Group, 2013; Nyrstar N.V., 2014).

Commodity Review

Metals

Cobalt.—N.V. Umicore S.A. increased its cobalt production in 2013 to 5,415 metric tons (t) from 4,200 t in 2012 according to the Cobalt Development Institute. This followed a trend of worldwide cobalt production increases. World consumption, however, seemed to remain at the same level (Cobalt Development Institute, 2014).

Zinc.—Nyrstar reported that the Balen/Overpelt smelter went through a major planned maintenance of the plant's roaster, acid plant, and cell house in the first half of 2013. This maintenance was performed on time, allowing the plant to recover production in the second half of the year and end at a higher level of production than in 2012 (Nyrstar N.V., 2014, p. 56).

Industrial Minerals

Cement.—In 2013, cement production in Belgium decreased slightly. The Fédération de l'Industrie Cimentière Belge [Belgian Federation of the Cement Industry] (FEBELCEM) reported that the value of construction sector output in Belgium decreased in 2013 by 1.6% compared with that of 2012. FEBELCEM also stated that domestic cement consumption decreased as a whole by 5.8%. FEBELCEM estimated, however, that, owing to the mild winter of 2013, many construction projects were not interrupted, which helped to stabilize consumption at levels similar to those of the past 10 years despite the decreases in 2013. FEBELCEM expected a slow recovery and did not expect the construction sector's output to increase by more than 1% in 2014 (FEBELCEM A.S.B.L., 2014, p. 4).

Diamond.—In 2013, the net trade of rough diamond in Belgium increased by 8%, and that of polished diamond increased by 4%, totaling a combined trade value of $55 billion, which is close to the all-time record high of $56.6 billion of 2011. In 2013, the Antwerp World Diamond Centre reported that it had reached a corporate agreement with Alrosa of Russia, which was the largest diamond producer, by volume, in the world. As a result, about 65% of Alrosa's diamond production was traded through Antwerp in 2013 (Antwerp World Diamond Centre, 2014).

Outlook

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

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LUXEMBOURG

In 2013, the iron and steel industry was Luxembourg's most economically important mineral industry sector, and steel was the country's main export commodity. Because the country 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 commodities only for domestic consumption. These minerals included dolomite, limestone, sand and gravel, and slate. Information on these operations was not readily available. Some commodity 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 volume, than its main competitor, Hebei Group of China (World Steel Association, 2014, p. 8).

In 2013, ArcelorMittal plants in Esch-Belval and Differdange agreed to revamp the electric arc furnace at the Belval facility, which has been commissioned in 1997 and would be re-fitted with a new lower shell using anode technology. The furnace would also have a new tilting frame as well as a renewed upper shell. ArcelorMittal expected that, with this investment, the productivity and production capacity of the plant would increase and maintenance costs for the plant would decrease. This upgrade would require the shutdown of the plant for 2 weeks; the upgrade was expected to start in March 2013, and the new furnace was expected to be commissioned in April 2013 (ArcelorMittal, 2013).

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.

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TABLE 1
BELGIUM AND LUXEMBOURG: PRODUCTION OF MINERAL COMMODITIES[1]

(Metric tons unless otherwise specified)

Country and commodity		2009	2010	2011	2012	2013[e]
BELGIUM[2]						
Metals:						
Cobalt, primary[3]		2,150 [e]	2,600 [e]	3,187	4,200	5,415 [4]
Copper:						
Smelter, secondary		117,400	118,600	112,900 [r]	118,000 [r]	150,000
Refined, primary and secondary		373,700	381,000	394,200 [r]	396,000 [r]	389,000
Iron and steel:						
Pig iron	thousand metric tons	3,087	4,688	4,725	4,072	4,343 [4]
Steel:						
Crude	do.	5,635	7,973	8,026	7,386	7,092 [4]
Hot-rolled products	do.	7,172	9,649	10,012	8,917 [r]	9,800
Lead, refined, secondary		109,000	105,000 [e]	88,129	87,958	87,900
Zinc:						
Slab:						
Primary		14,000	260,000	282,000	250,000	252,000 [4]
Secondary, possibly remelted zinc[e]		40,000	40,000	40,000	40,000	40,000
Total		54,000	300,000	322,000	290,000	292,000
Powder[e]		20,000	20,000	20,000	20,000	20,000
Industrial minerals:						
Cement	thousand metric tons	5,990 [r]	6,095 [r]	6,954 [r]	6,280 [r]	6,119 [4]
Nitrogen, N content of ammonia[e]	do.	830	830	830	830	830
Mineral fuels and related materials:						
Coke, all types	do.	1,735 [r]	2,133 [r]	2,120 [r]	2,100	2,100
Gas, manufactured	thousand cubic meters	-- [r]	-- [r]	-- [r]	-- [r]	-- [r]
Petroleum refinery products:						
Liquefied petroleum gas	thousand 42-gallon barrels	5,289	6,205	6,200	5,439 [r]	5,400
Naphtha and white spirit	do.	14,300	14,300	NA	NA	NA
Gasoline	do.	32,338	30,186	30,100	27,558 [r]	27,500
Kerosene	do.	16,294	15,950	15,900	13,870 [r]	13,800
Kerosene, other	do.	466	511	510	511 [r]	500
Distillate fuel oil	do.	88,289	93,075	93,000	98,477 [r]	98,400
Refinery gas	do.	3,800	3,800	NA	NA	NA
Residual fuel oil	do.	34,432	35,150	35,100	37,449 [r]	37,400
Bitumen	do.	8,600	8,600	NA	NA	NA
Total	do.	203,808	207,777	180,000	183,304 [r]	183,000
LUXEMBOURG						
Metals, steel:						
Crude	thousand metric tons	2,215	2,563	2,521 [4]	2,232	2,200
Hot-rolled products	do.	2,910	1,941	2,220 [4]	2,000	2,000
Industrial minerals:						
Cement, hydraulic[e]	do.	1,000	1,080	1,319 [4]	1,220	1,200

[e]Estimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. [r]Revised. NA Not available. do. Ditto. -- Zero.
[1]Table includes data available through August 5, 2014.
[2]In addition to the commodities listed, Belgium produced a number of other metals, alloys, and industiral minerals such as secondary aluminum, bismuth metal, selenium, sulfur, secondary tin metal, kaolin, lime and dead-burned dolomite, quicklime, sodium sulfate, sulfuric acid, and worked and natural stone, and Luxembourg produced phosphates (Thomas slag), for which only aggregate output figures were available.
[3]Production reported by N.V. Umicore S.A.; includes production from China and South Africa.
[4]Reported figure.

TABLE 2
BELGIUM AND LUXEMBOURG: STRUCTURE OF THE MINERAL INDUSTRIES IN 2013

(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.	Hoboken	1,800
Cement		Major companies include:	Plants, of which:	8,400
Do.		Cimenteries CBR SA (HeidelbergCement 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	N.V. Umicore S.A.	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		N.V. Umicore S.A.	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 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 berrels 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:		Various companies, including:	Of which:	
Crude		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		NLMK Clabecq S.A. (NLMK Group)	Rolling mill at Clabecq	750
Do.		Industeel Belgium S.A. (ArcelorMittal)	Rolling mill at Charleroi	600
Do.		ArcelorMittal Gent (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 Esch-Schifflange	5,320

Do., do. Ditto.
[1]Includes the capacity of the company SA Ciments de Haccourt.