THE MINERAL INDUSTRY OF

SWITZERLAND

By Harold R. Newman

The reserves of the small deposits of metalliferous ores that existed in Switzerland have been mostly depleted, and metal mining has ceased. Any new metal mining activities are being discouraged for environmental reasons. In 2001, mineral production was limited to mainly industrial mineral commodities required for construction; these included cement, clays, gravel, gypsum, lime, and sand (table 1). The mineral industry is largely controlled by the Government and is owned either privately or by regional governments (table 2). The 26 regional (cantons), or communal, governments grant mining or processing licenses and directly operate electrical generating facilities, gas utilities, local transportation facilities, and water resources

Metal processing was confined to the production of primary and secondary aluminum, secondary lead, and steel. All metal production in Switzerland was from either imported raw materials or scrap. Switzerland relied on imports for many mineral commodities because of self-imposed environmental restrictions and lack of natural resources. Concerns about environmental pollution reportedly caused the adoption of a policy to curtail gradually or perhaps even cease smelting activities.

Alusuisse Sierre AG invested \$14 million in a new strip treatment facility for auto body aluminum sheet. When Alcan and algroup merged in October 2000, Alusuisse became part of the Alcan Group of companies. The new factory doubled the

production capacity of automotive sheet at Sierre. In 2001, rolled products output was about 90,000 metric tons (t), of which about 40% was supplied to the automotive market; the remainder goes into machinery and other industrial uses. In addition, Alusuisse produced 30,000 t of extrusions and had two of the largest presses in Europe capable of extruding shapes up to 700 millimeters in circumference (Cundy, 2001).

A secondary lead smelter produced antimonial and calcium lead and a small amount of soft solder in bars from recycled batteries. The steel industry in Switzerland was characterized by a relatively small domestic market and a high degree of specialization (table 2).

Switzerland, which is a large diamond center, was actively involved in cutting and polishing diamonds. The country played a big role in international trade activities, although it has no diamond mines and the main diamond centers are in Antwerp, Belgium, London, United Kingdom, and Tel Aviv, Israel.

For more extensive coverage of the mineral industry of Switzerland, see the 2000 Minerals Yearbook, International Review of Europe and Central Eurasia, volume III.

Reference Cited

Cundy, Christopher, 2001, Advanced automotive sheet production for Alcan in Switzerland: Metal Bulletin Monthly, no. 364, April, p. 26.

 ${\bf TABLE~1}\\ {\bf SWITZERLAND:~ESTIMATED~PRODUCTION~OF~MINERAL~COMMODITIES~1/~2/}$

(Thousand metric tons unless otherwise specified)

Commodity 3/	1997	1998	1999	2000	2001
METALS					
Aluminum:					
Primary metric tons	27,339 4/	32,062 4/	34,439 4/	35,539 r/4/	36,000
Secondary do.	6,000	6,000	15,000	15,000	6,000
Iron and steel:					
Pig iron	100	100	100	100	100
Steel, crude	1,047 r/ 4/	1,018 r/4/	1,037 r/4/	1,140 r/	1,100
Semimanufactures, rolled products	700	700	700	700	700
Lead, refined, secondary metric tons	6,000	7,600	9,200 r/4/	10,100 r/ 4/	9,800
INDUSTRIAL MINERALS					
Cement, hydraulic	3,568 4/	3,600	3,600	3,600	3,600
Gypsum	300	300	300	300	300
Lime	35	35	30	30	30
Nitrogen, N content of ammonia	32	31	32	33 r/4/	31
Salt	300	300	300	300	300
Sulfur from petroleum refining metric tons	5,000	4,000	3,000	3,000 r/	3,000
MINERAL FUELS AND RELATED MATERIALS					
Petroleum refinery products:					
Liquefied petroleum gas thousand 42-gallon barrels	2,000	2,000	2,000	2,000	2,000
Gasoline do.	9,000	9,000	9,000	9,000	9,000
Jet fuel do.	2,000	2,000	2,000	2,000	2,000
Distillate fuel oil do.	9,500	9,500	9,500	9,500	9,500
Residual fuel oil do.	5,500	5,500	5,500	5,500	5,500
Bitumen do.	800	800	800	800	800
Refinery fuel and losses do.	2,000	2,000	2,000	2,000	2,000
Total 5/ do.	30,800	30,800	30,800	30,800	30,800

r/ Revised.

 ${\small TABLE~2} \\ {\small SWITZERLAND:~STRUCTURE~OF~THE~MINERAL~INDUSTRY~IN~2001} \\$

(Thousand metric tons unless otherwise specified)

				Annual
C	Commodity	Major operating companies and major equity owners	Location of main facilities	capacity
Aluminum Alusuisse Sierre AG (Alcan Group, 100%)		Alusuisse Sierre AG (Alcan Group, 100%)	Smelter at Stag, plant at Sierre	168
Cement	Cement Bundr Cementwerke AG (Holderbank Management and Consulting Ltd., 100%)		Plant at Untervaz	700
Do.		Cementfabrik Holderbank AG	Plant at Rekingen	700
Lead, so	econdary	Metallum AG	Smelter at Pratteln	13
Refiner	y, petroleum	Reffinerie du Sud-Ouest SA (Compagnie Française des Petroles, 49%; British	Refinery at Collombey	40,000
	barrels per day	Petroleum, 49%)		
Do.	do.	Reffinerie de Cressier SA (Petroplus International NV, 100%)	Refinery at Cressier	68,000
Salt		Zentralbureu des Vereins der Schweizerischen Rheinsalinen (Government, 100%)	Saline at Schweizerhalle	350
Do.		La Societe des Mines (Canton of Vaud, 100%)	Saline at Bex	50
Steel		Stahl Gerlafingen AG (Swiss Steel AG, 100%)	Plant at Gerlafingen	650
Do.		Von Moss Stahl AG (Swiss Steel AG, 100%)	Plant at Emmenbrucke	300

^{1/} Table includes data available through February 2002.

^{2/} Estimated data are rounded to no more than three significant digits; may not add to totals shown.

^{3/} In addition to the commodities listed, a variety of crude construction materials (common clay, sand and gravel, and stone) were produced, but output was not reported, and available general information was inadequate to make reliable estimates of output level.

^{4/} Reported figure.

^{5/} Total of listed products only.