

THE MINERAL INDUSTRY OF SWITZERLAND

By Harold R. Newman

The reserves of the small deposits of metalliferous ores that existed in Switzerland have long since been depleted and metal mining has ceased. Current mineral production was limited mainly to commodities required for construction, including cement, clays, gravel, gypsum, lime, and sand. The mineral industry is largely controlled by the Government and is owned either privately or by regional governments (cantons). Cantonal or communal governments grant mining or processing licenses and directly operate electrical generating facilities, water resources, gas utilities, and local transportation facilities. Concerns about environmental pollution reportedly caused the adoption of a policy to gradually curtail or perhaps even cease smelting activities.

Metal processing was confined to the production of primary and secondary aluminum, secondary lead, and steel. All metal production in Switzerland was either from imported raw materials (aluminum and steel) or from scrap (aluminum and lead). Switzerland relied on imports for many mineral commodities, due to self-imposed environmental restrictions and lack of natural resources. (*See table 1.*)

More than one of every two francs earned by the Swiss economy comes from abroad. Switzerland was among the leading exporters for both services (fifth ranking) and goods (ninth ranking) in the world. The country was a major trading partner of the European Union (EU), being the third largest

supplier to the EU, after the United States and Japan. At the same time it was the EU's second most important customer after the United States. Other major EU trading partners, in order of importance, were Germany, France, and the United Kingdom.

Alusuisse-Lonza Holding AG was the only aluminum producer in Switzerland. The plant was operating below capacity, and the company, reportedly, was considering closing the operation. A significant amount of primary aluminum for downstream production came from the wholly Swiss-owned Icelandic Aluminium Co. in Iceland and the jointly Swiss-Norwegian-owned Sor-Norge Aluminium A/S in Norway. A secondary lead smelter produced antimonial and calcium lead, and a small amount of soft solder in bars, from recycled batteries. (*See table 2.*)

The steel industry in Switzerland was characterized by a relatively small domestic market and a high degree of specialization. The existing plants accounted for about 50% of domestic consumption. About 30% of this consumption consisted of rebar and reinforcing mesh. Von Roll Group was expected to intensify production of rebar at its 650,000-metric-ton-per-year newly modernized and expanded plant in Gerlafingen.

Switzerland is a large diamond center with a turnover of over a billion dollars. The country's international trade in diamonds for 1995-96 is shown in table 3 and 4.

TABLE 1
SWITZERLAND: PRODUCTION OF MINERAL COMMODITIES 1/

(Thousand metric tons unless otherwise specified)

Commodity 2/		1992	1993	1994	1995	1996 e/
METALS						
Aluminum:						
Primary	metric tons	52,148	36,439	24,172	28,000	28,000
Secondary	do.	10,700	4,200	--	--	--
Iron and steel:						
Pig iron		110	110	110	100	100
Electric-furnace ferroalloys e/		5	5	5	5	5
Steel, crude		1,240	1,260	800	1,000	1,000
Semimanufactures, rolled products e/		1,000	1,000	700	700	700
Lead, refined, secondary	metric tons	6,400	6,000	6,350	6,400 e/	6,200
INDUSTRIAL MINERALS						
Cement, hydraulic e/		4,260 3/	4,000	4,000	4,000	3,800
Gypsum		324	299	298	300 e/	300
Lime e/		30	40	40	35	35
Nitrogen, N content of ammonia		31	28	30 e/	30 e/	30
Salt e/		276 3/	300	300	300	300
Sulfur, from petroleum refining e/	metric tons	3,160 3/	3,000	3,000	3,000	3,000
MINERAL FUELS AND RELATED MATERIALS						
Petroleum refinery products: e/						
Liquefied petroleum gas	thousand 42-gallon barrels	1,990 3/	2,000	2,000	2,000	2,000
Gasoline	do.	8,330 3/	8,500	8,500	9,000	9,000
Jet fuel	do.	1,960 3/	2,000	2,000	2,000	2,000
Distillate fuel oil	do.	9,540 3/	9,500	9,500	10,000	9,500
Residual fuel oil	do.	5,520 3/	5,500	5,500	6,000	5,500
Bitumen	do.	812 3/	800	800	800	800
Refinery fuel and losses	do.	2,180 3/	2,200	2,200	2,000	2,000
Total 4/	do.	30,332 3/	30,500	30,500	31,800	30,800

e/ Estimated.

1/ Table includes data available through March 1997.

2/ 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 levels.

3/ Reported figure.

4/ Total of listed products only.

TABLE 2
SWITZERLAND: STRUCTURE OF THE MINERAL INDUSTRY FOR 1996

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Aluminum	Alusuisse-Lonza Holding AG	Smelter at Stag	48
Cement	Bundr Cementwerke AG (Holderbank Management and Consulting Ltd. 100%)	Plant at Untervaz	700
Do.	Cementfabrik Holderbank AG	Plant at Rekingen	700
Lead, secondary	Metallum AG	Smelter at Pratteln	13
Refinery, petroleum			
billion barrels per day	Reffinerie du Sud-Ouest SA (Compagnie Francaise des Petroles 49%, and British Petroleum 49% are major share holders.)	Refinery at Collombey	40,000
Do .	Reffinerie de Cressier SA (Kninklijke Nederlandsche Petroleum Maatschappij NV 100%)	Refinery at Cressier	36,000
Salt	Zentralbureau 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	Monteforno Acciaierie e Laminatoi SA (Von Roll Group 93.6%)	Plant at Bodio	380
Do .	Von Roll Group	Plant at Gerlafingen	370
Do .	Von Moss Sthal AG	Plant at Emmenbrucke	300

TABLE 3
SWITZERLAND: EXPORTS OF DIAMOND

(Thousand dollars)

Destination	1995	1996 (Jan.-Nov.)
Sorted, unworked or simply sawn, cleaved, or bruted:		
Israel	393,039	22,954
South Africa	81,362	6,009
United Kingdom	602,327	91,254
Unspecified	11,293	72,017
Total	1,088,021	1,092,225

Source: Diamond International, March/April 1997, No. 46, p 91, London, United Kingdom.

TABLE 4
SWITZERLAND: IMPORTS OF DIAMOND

(Thousand dollars)

Source	1995	1996 (Jan.-Nov.)
Natural rough, unsorted, and sorted, unworked or simply sawn, cleaved, or bruted:		
Israel	1,384	NA
South Africa	NA	NA
United Kingdom	881,423	122,864
Unspecified	--	--
Total	909,102	1,195,232

NA Not available.

Source: Diamond International, March/April 1997, No. 46, p 91, London, United Kingdom.