

ANVIL SMELTER STUDY

ZINC AND LEAD SURVEY

062010

May 1974

NEW YORK

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May 31, 1974

Mr. Robert L. Cook
Anvil Mining Corporation Limited
1550 Alberni St.,
Vancouver 5, B.C. Canada

Dear Bert:

Enclosed is the order of magnitude marketing cost estimate which you requested from us during your visit to this office on April 29th. Please pardon the delay in mailing this report which was caused by unavoidable absences from the office of key personnel and by a wait for verification of insurance estimates.

You will note the survey is dated May 7th and we would suggest that if there is any significant time lag in compiling your final study, it would be well to recheck all freight costs which are, as you know, constantly rising.

The movement of a sizeable production of refined lead and zinc from the interior of the Yukon Territory via Skagway to ultimate destination in many different parts of the world presents very difficult logistic problems. The seller must meet the competition of other producers better placed as to availability of shipping. We believe, therefore, it is necessary to move bulk quantities to another point such as Vancouver to be used as a staging area. Accordingly, our survey is based on this assumption.

You will note we estimate the costs of shipping and delivering refined zinc and/or lead from Skagway to ultimate destination at 3.50¢ to 3.75¢ per pound, exclusive of sales and administration, which we estimate at \$10.00 per ton or 1/2¢ per pound. Thus the overall cost would be 4.00 to 4.25¢ per pound. This does not include the cost of financing pipeline stocks as you indicated this would become part of your own cost estimate. We believe it prudent to estimate 90 days between shipment from the plant and receipt and payment by the buyer.

May 31, 1974

2.

Mr. Robert L. Cook
Anvil Mining Corporation Limited

In preparing this survey we have drawn on our experience of many years in marketing lead and zinc, not only in North America, but throughout the world. This study directly involved members of our sales staff, both here and abroad, and our shipping company. It represents our best judgment based on our extensive experience.

We hope it will serve your purpose at the present time, but should you have any further questions, or require additional information, please let us know.

We believe our estimated cost of sales and administration to be conservative. It is based on our experience of the cost of maintaining a worldwide sales organization such as would be needed by you or anyone else with responsibility for marketing potentially large tonnages of lead and zinc. Included are salaries and fringes. Sizeable sales and administrative staff would be required. Other costs include rent, taxes, utilities, travel, communication and other services, including overseas representation.

Should you in the future reach a decision to build a smelting and refining complex in the Yukon, we would be pleased to have the opportunity of discussing with you how we might best serve you in marketing the output.

As you know, we maintain a worldwide sales organization with offices or agents in the principal consuming areas of the world and are presently actively engaged in selling both lead and zinc, as well as other commodities, in these markets. We could, therefore, offer you our services as your sales agent with the benefits of our experience and established organization. On the basis of our present fee of 1 percent of the gross value and today's level of the zinc producer price and the LME lead price, we believe there would be a significant saving to you as compared to establishing your own offices. In addition to sales, we would administer all contracts, shipping, and provide technical services. Of course, at the proper time, we would be glad to submit a formal proposal.

We would be prepared to consider purchasing from you the whole or part of the potential production if this would be of interest. We are also prepared to consider other alternatives, including the possibility of financial assistance.

May 31, 1974

3.

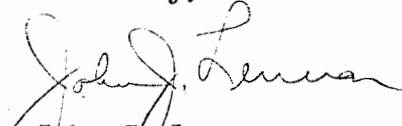
Mr. Robert L. Cook
Anvil Mining Corporation Limited

We are presenting these suggestions to you with the hope you will keep in mind our interest in working with you should a decision be taken to go ahead with the construction of a smelting and refining complex.

We think as your studies progress, you may find the need of a more comprehensive market evaluation which we would be glad to undertake for you. Such a survey would require more time and some extensive traveling, both in North America and abroad. At the appropriate time, if it arises, we would be glad to discuss with you the organization of such a comprehensive study.

We shall telephone you early next week to discuss our proposed fee for the preparation of this enclosed study and in case you require additional information.

Sincerely,



John J. Lennon

JJL:h
Enc.

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May 7, 1974

ANVIL MINING CORPORATION LIMITED

ZINC AND LEAD SURVEY

ZINC

Marketing of from 70,000 to 140,000 short tons annually of refined zinc produced in the Yukon requires maximum ability to compete in price, quality, delivery and all other forms of service to customers. There are areas, say Canada and the U.S.A., where this zinc would have political or geographical advantages; others, such as Europe, particularly OEEC countries, and Latin America where the reverse would apply and still others, for example many far eastern destinations, where the competitive situation among various supply origins would be fairly fluid. The Communist countries as a group presently are relatively self-sufficient, in fact are modest net exporters, and are therefore not considered in this study. Of course any of these countries may at times, for political and economic reasons, import from outside the Communist orbit.

Contiguity demands a strong effort in Canada, and contiguity and size of market demand a major effort in the U.S.A., the main future worry in the U.S.A. being the possibility (not now thought imminent) of increased import duties or the imposition of import quotas. U.S. producers have been slow to move on new refining facilities. Canada of course is a large and increasing exporter of slab zinc, but its consumption of zinc is sizeable and has been growing, reaching an estimated 140,000 short tons in 1973. Anvil would certainly be warranted in seeking a proportionate-to-production share of the Canadian market. Consumption of slab zinc in the U.S.A. is estimated at 1,500,000 short tons in 1973. We believe zinc consumption in the U.S. and Canada, despite a probable set-back 1974 vs. 1973, will maintain its historic moderate growth rate and that around 60% of Anvil's production would be marketed in these 2 countries, say 15% to 20% in Canada and the remainder in the U.S.

Around 5% of Anvil's zinc production is estimated as saleable in Latin America, primarily in Brazil, although there is potential in Venezuela, Colombia, Chile, Uruguay and the smaller countries. Argentina (except occasionally), Mexico and Peru are not likely prospects because of existing zinc smelters in these countries which can adequately (in the case of Mexico and Peru much more than adequately) fill consumer needs. The overall market is presently comparatively small, around 100,000 short tons of net imports in the importing countries, and there are already 4 sizeable Latin American producers vying for sales,

as well as numerous non-LAFTA producers usually competing in some way and for some reason. We are, however, optimistic that Brazil, in particular, will continue to increase its consumption and import more pending further development of its own zinc resource.

Anvil should budget sales of around 10% to Japan, Taiwan, Korea, the Philippines, India, and other Far Eastern countries, an area of substantial growth and where growth should continue. Expansion by Japan of zinc refining has apparently subsided due to pollution concerns.

The remaining 25% of Anvil's production should be targeted to Europe and the Middle East. but the sales job is not easy. Consumption of zinc in Europe has been growing at a strong rate and is estimated at about 1,900,000 short tons in 1973. However, unlike the U.S., closure of old, uneconomic plants in Europe is being at least offset by erection of new facilities and additional future refinery construction is probable.

About 50% of Anvil's sales are estimated to be in the form of Special High or High Grade. The remainder will be in lower grades requiring, however, strict control over contents and additives in many cases. High quality in every aspect is essential.

Based on current cost estimates from Skagway and using Vancouver as a staging point for shipments to the various markets, our calculations are as follows:

Skagway/Vancouver

<u>Item</u>	<u>Estimate Per Metric</u>	
	<u>Ton</u>	<u>- U.S. \$</u>
Stevedoring - 5,000 MT Barge		\$ 6.00
Barge to Vancouver		10.00
Unloading Barge at Vancouver		3.50
One month's closed storage at Vancouver		1.00
Handling at Vancouver (Includes outgoing truck load- ing, where applicable)		<u>2.00</u>
TOTAL		\$22.50

SKAGWAY TO MARKET VIA VANCOUVER

ESTIMATE PER METRIC TON - U.S. \$ - TO MARKET SHOWN

<u>Item</u>	<u>U.S.A.</u>	<u>Canada</u>	<u>Europe & Middle East</u>	<u>Asia & Far East</u>	<u>Latin America</u>
Above Total	22.50	22.50	22.50	22.50	22.50
RR Carloading	1.50	1.50	--	--	--
Trucking to S/S Pier Vancouver	--	--	2.80	2.80	2.80
Average Freight	32.00	30.00	45.00	60.00	104.00
Insurance (40¢ lb. value)	5.00	5.00	6.50	6.75	6.75
Import Duty	<u>12.70</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>
Total Ind.Mkt.Cost	73.70	59.00	76.80	92.05	136.05
@ % Market	45	15	25	10	5
Weighted Ind. Mkt. Cost	33.17	8.85	19.20	9.21	6.80

The total weighted average estimated cost is \$77.23 per metric ton, equivalent to 3.5¢ per pound. It is stressed that these are our best estimates of costs at rates currently prevailing. All costs have been increasing steadily and often sharply and the nearby outlook is for costs so to continue to increase. The items included in costs presume that sales would be made and delivered as customary in the trade, that is, F.O.B. Buyers' plants in Canada/U.S. (duty paid on latter) and C.I.F. destination ports elsewhere. Consequently, any selling price assumptions should equate to these bases. There will inevitably be additional costs, such as for example fees paid to customs brokers and freight forwarders, advertising, trade association dues, unpaid claims, bad debts, etc., and it is prudent to provide at least 1/4¢ per pound for these contingencies.

LEAD

As in the case of refined zinc, marketing of from 50,000 to 103,000 short tons annually of Anvil's refined lead demands full competitiveness. Quality is particularly important because of the high purity of many of the competing brands. Our comments on political and geographical advantages apply similarly to lead as to zinc. However, in the case of lead,

the Communist countries as a group presently are importers rather than exporters of lead on balance, and sales of moderate tonnages to China, Czechoslovakia and Poland, for instance, are quite possible.

Consumption of refined lead in the U.S. in 1973 is estimated at 1,500,000 short tons, about the same as zinc. Growth of lead consumption in the U.S. and elsewhere has been slower, if steadier, than zinc, and mine and primary refinery production has grown rather than receded. Lead scrap recovery, mainly from old automotive batteries, and resultant refined production, is highly important in the U.S. as well as in other industrial countries. Although the U.S. is much more self-sufficient in lead than it is in zinc, there is a logical and probable market in the U.S. for from 25% to 30% of Anvil's production. In Canada, although it is a net exporter also of lead, we indicate sales of from 20% to 25% of Anvil's lead.

The other major market area is Europe, including the Communist countries, and here we estimate sales of about 35%. The European market area is currently the largest in the world and undoubtedly will continue to be. Penetration in the Far Eastern and Latin American areas is projected on the same level as for zinc, 10% and 5%, respectively.

General conditions of marketing, distribution within market areas, and delivery costs, are, except as previously noted, relatively the same for lead as they are for zinc. The most significant present cost differences are higher U.S. import duty, 1.0625¢ per pound, offset largely by a 5% to 10% lower U.S. rail freight structure; a similar lower rail freight structure in Canada, and lower cost of insurance due to the lower price of lead. However, considering also the somewhat different market projections for lead, the pluses and minuses cancel themselves almost wholly, as compared to the total weighted average cost for zinc. For purposes of this order-of-magnitude study, no difference in cost estimate is projected for lead than for zinc.

Cost of Making and Administering Sales

We estimate the cost of maintaining a marketing, shipping and expediting, accounting and supporting staff, plus other attendant expenses including sales agencies in certain areas, at a minimum of 1/2¢ per pound, based on maximum combined volume of around 250,000 tons. If lower tonnages were to be marketed, expenses would in total be lower, but this would not necessarily reduce the unit cost, which would in fact probably increase.

May 3, 1974

ANVIL SMELTER STUDY

This study was approached with a view towards providing various options in order to allow flexibility and lowest cost of shipment depending upon market conditions and marketing strategies and needs. For smaller shipments, it is possible to serve the areas in question by shipping to and storing at Vancouver and re-shipping by the liner services calling at the Port of Vancouver. Depending upon the ship charter market, it may perhaps be advantageous to ship larger quantities directly from Skagway to foreign destinations for storage and distribution.

All rates, charges, etc. are based on current available information. In many cases, assumptions and estimates had to be made due to the time limitation. We would expect to be able to reduce these rates when actually negotiating with firm business.

Following charges are based on one ton bundles and blocks of lead and zinc suitable for machine handling:

- I. Loading Skagway (estimated rates - actual charges will have to be negotiated with the White Pass & Yukon Railroad as it will be necessary to modify the existing warehousing and pier facilities as well as negotiate different labor contracts.)

Bert Cook was going to discuss above as well as rail service and through container rates to Vancouver with the railroad:

A. to barge - \$6.00/M.T.

B. to vessels - \$15.00/M.T.

II. Barge - Skagway to Vancouver -

Basis - 5,000 ton barge - \$10.00/M.T.

III. Stevedoring and Warehousing costs - Vancouver.

A. Stevedoring ex barge to warehouse -
\$3.50/M.T.

B. Storage - Open - 50¢, covered -
\$1.00/M.T./Month

C. Handling charges (Handling in and out) -
\$2.00/M.T.

1. Truck loading - included in handling.

2. Rail car loading - additional \$1.50/M.T.

D. Trucking: Warehouse to piers - \$2.80/M.T.

IV. Rail - Vancouver to U.S. and Canadian destinations. Current Trail tariff (May 1, 1974) can be used, i.e.:

TRAIL, B. C.

TO:

	<u>Lead</u>	<u>Zinc</u>
Montreal	\$31.32/N.T.	\$33.20/N.T.
Toronto) Windsor)	\$30.23/N.T.	\$32.09/N.T.

Minimum Weight (both Lead and Zinc) 144,000 lbs. Tail
End 126,000 lbs.

V. Liner rates to foreign destinations. Weekly sail-
ings from Vancouver.

- A. To Italian ports (Genoa, Naples) - \$51.40/M.T.
- B. To Continent (Antwerp, Rotterdam, Hamburg,
LeHavre) - \$39.00/M.T.
- C. To U.K. base ports - \$37.80/M.T.
- D. To Japanese base ports - \$57.40/M.T.
- E. To Valparaiso, Chile - \$117.83/M.T.
- F. To Rio De Janeiro/Santos, Montevideo,
Buenos Aires - \$103.15/M.T.

VI. Charter vessel rates Skagway 20,000 and 15,000 ton
vessels, F.I.O. basis.

- A. To Italian ports - \$30.00 - \$37.00/M.T.
- B. To Continent - \$28.00 - \$36.00/M.T.
- C. To U.K. - \$28.00 - \$36.00/M.T.
- D. To Japan - \$19.00 - \$23.00/M.T.

VII. Stevedoring and Warehousing costs at destination

(Estimated averages - exact rates dependent on actual port):

A. Stevedoring

1. Italy - \$2.50/M.T.
2. Continent - \$5.50/M.T.
3. U.K. - \$7.80/M.T.
4. Japan - \$4.50/M.T.

B. Handling to Warehouse

1. Italy - \$7.80/M.T.
2. Continent - \$5.10/M.T.
3. U.K. - \$3.90/M.T.
4. Japan - \$3.00/M.T.

C. Storage Charges

1. Italy - \$1.25/M.T./Month
2. Continent - \$1.55/M.T./Month
3. U.S. - \$1.33/M.T./Month
4. Japan - \$5.00/M.T./Month

D. Loading Out Charges

1. Italy - \$4.00/M.T.
2. Continent - \$3.80/M.T.
3. U.K. - \$3.90/M.T.
4. Japan - \$3.60/M.T.

For easier reference, we have attached a table covering all of the above.

ANVIL SMELTER STUDY	Rail to U.S. and Canadian Destinations via Vancouver	LINER VESSELS SKAGWAY-VANCOUVER-DESTINATION				CHARTER VESSELS SKAGWAY TO DESTINATION							
		LINER PARCELS				15,000 TON VESSELS				20,000 TON VESSELS			
		COUNTRY U. S. and CANADA	ITALY	CONT.	U. K.	JAPAN	ITALY	CONT.	U. K.	JAPAN	ITALY	CONT.	U. K.	JAPAN
ITEM													
Stevedoring: Skagway 5,000 Ton Barge	\$ 6.00	\$ 6.00	\$ 6.00	\$ 6.00	\$ 6.00	-	-	-	-	-	-	-	-
Stevedoring: Skagway Vessel	-	-	-	-	-	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00	\$15.00
Barge to Vancouver	\$10.00	\$10.00	\$10.00	\$10.00	\$10.00	-	-	-	-	-	-	-	-
Unload Barge Van- couver	\$ 3.50	\$ 3.50	\$ 3.50	\$ 3.50	\$ 3.50	-	-	-	-	-	-	-	-
One Month's Closed Storage @ Vancouver	\$ 1.00	\$ 1.00	\$ 1.00	\$ 1.00	\$ 1.00	-	-	-	-	-	-	-	-
Handling Charges - Vancouver (incl. truck ldg.)	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	\$ 2.00	-	-	-	-	-	-	-	-
Rail Car Loading	\$ 1.50	-	-	-	-	-	-	-	-	-	-	-	-
Trucking To Pier Vancouver	-	\$ 2.80	\$ 2.80	\$ 2.80	\$ 2.80	-	-	-	-	-	-	-	-
Liner Freight Rate	-	\$51.40	\$39.00	\$37.80	\$57.40	-	-	-	-	-	-	-	-
F.I.O. Freight Rate	-	-	-	-	-	\$37.00	\$36.00	\$36.00	\$23.00	\$30.00	\$28.00	\$28.00	\$19.00
Vessel Discharge	-	-	-	-	-	\$ 2.50	\$ 5.50	\$ 7.80	\$ 4.50	\$ 2.50	\$ 5.50	\$ 7.80	\$ 4.50
Handling Charges	-	-	-	-	-	\$ 7.80	\$ 5.10	\$ 3.90	\$ 3.00	\$ 7.80	\$ 5.10	\$ 3.90	\$ 3.00
One Month's Storage	-	-	-	-	-	\$ 1.25	\$ 1.55	\$ 1.35	\$ 5.00	\$ 1.25	\$ 1.55	\$ 1.35	\$ 5.00
Loading Out Charges	-	-	-	-	-	\$ 4.00	\$ 3.80	\$ 3.90	\$ 3.60	\$ 4.00	\$ 3.80	\$ 3.90	\$ 3.60
TOTAL													
All U.S. & M.T.	\$24.00 +	\$76.70	\$64.30	\$63.10	\$82.70	\$67.55	\$66.95	\$67.95	\$54.10	\$60.55	\$58.95	\$59.95	\$50.10

+ Add applicable
rail freight to
destination.

M E M O R A N D U M

May 22, 1974

Subject: Insurance Rates for Lead & Zinc Metals

To: Mr. W. H. Vogelstein

From: Mr. J. Zanko

	<u>Marine</u>	<u>War</u>	<u>Total</u>
Little Salmon, Yukon Territory (Rail/Truck) via Skagway, Alaska To Vancouver, B.C. (Barge)*	Est. .550	-	.550
Storage Insurance/Mo.**	.01667	-	.01667
Inland Movement U.S./Canada	.002	-	.002

	<u>Marine</u>	<u>War</u>	<u>Total</u>
Ocean shipments from Vancouver to:			
United Kingdom & Bord./Hamb. Range	.132	.0375	.1695
Italy (not East of Sicily) via Mediterranean Ports	.132	.0375	.1695
Japan/Philippine Islands	.148	.0375	.1855
Brazil	.175	.025	.200

NOTE: These rates are per \$100 valuation

* Would have to arrange for Charterers Legal Liability Insurance if barges are chartered for this movement. Rate condition based on no released value/no waiver subrogation.

** Current Limit of Liability \$600,000.

ZINC

World Mine Production

THOUSAND METRIC TONS

	1969	1970	1971	1972	1973	1973		1974		
						Nov	Dec	Jan	Feb	Mar
EUROPE										
Austria	12.1	12.2	18.6	19.9	17.2	1.6	1.6	1.7	1.5	1.7
Finland	70.8	62.7	50.9	49.9	58.6	4.9	4.9	5.7	4.2	5.6
France	20.1	18.6	15.1	13.3	13.3	1.3	1.6	1.1	1.1	1.2
Germany, Federal Republic	134.0	137.7	147.7	138.8	142.6	12.0	10.8	12.8	10.7	12.0
Greece	10.2	8.2	10.2	17.0	19.4	1.5	1.5	1.5	1.5	1.5
Greenland	-	-	-	-	46.1	16.0	15.0	6.4	7.4	7.6
Irish Republic	105.2	108.4	87.5	95.0	83.0	8.0	8.0	8.0	8.0	8.0
Italy	132.8	110.7	106.0	102.6	80.6	7.0	6.7	7.0	4.6	6.0
Norway	11.2	10.4	11.0	15.6	18.7	1.6	1.6	1.8	1.9	2.0
Portugal	1.6	1.6	2.1	1.8	1.6	0.1	0.1	0.1	0.1	0.1
Spain	80.8	95.5	92.0	89.0	93.4	8.3	8.4	8.9	7.0	8.4
Sweden	85.4	89.0	95.6	109.8	114.7	8.3	9.4	9.4	9.4	9.5
Yugoslavia	76.1	78.0	76.8	74.3	88.0	6.6	6.6			
Total	740.3	733.0	713.5	727.0	777.2	77.2	76.2	71.0	64.0	70.2
AFRICA										
Algeria	20.8	16.9	19.6	22.0	24.0	2.0	2.0	2.0	2.0	2.0
Morocco	34.0	20.0	12.5	7.0	6.0	0.5	0.5	0.5	0.5	0.5
South West Africa	38.2	46.1	48.9	44.6	52.6	4.5	4.5	4.5	4.5	
Tunisia	10.0	9.0	11.8	21.0	20.4	1.7	1.7	1.7	1.7	1.7
Zaire	96.0	104.0	109.0	100.0	100.1	8.3	8.3	8.3	8.3	8.3
Zambia	68.2	65.8	68.9	70.5	73.2	8.6	7.3	5.9	7.9	7.5
Other	3.8	-	2.2	2.2	2.1	0.2	0.2	0.2	0.2	0.2
Total	271.0	261.8	272.9	267.3	278.4	25.8	24.5	23.1	25.1	
ASIA										
Burma	4.0	6.0	6.0	5.0	6.0	0.5	0.5	0.5	0.5	0.5
India	8.0	9.0	9.0	9.0	11.0	1.0	1.0	1.0	1.0	1.0
Japan	269.4	279.7	294.4	281.0	263.9	21.1	21.1	19.8	18.7	
Turkey	10.7	23.0	24.0	19.2	24.0	2.0	2.0	2.0	2.0	2.0
Philippines	3.3	3.2	3.9	4.6	4.8	0.4	0.4	0.4	0.4	0.4
Other	72.7	80.8	81.1	100.4	104.0	8.5	8.5	8.5	8.5	8.5
Total	368.1	401.7	418.4	419.2	413.7	33.5	33.5	32.2	31.1	
AMERICA										
Argentina	32.0	39.0	38.0	36.2	35.2	3.0	3.0	2.2	2.2	2.2
Bolivia ⁽¹⁾	34.2	47.0	46.0	40.0	37.0	3.0	3.0	3.0	3.0	3.0
Canada	1 179.4	1 253.1	1 270.3	1 278.6	1 351.0	119.5	109.7	111.3	107.8	
Mexico	251.6	263.0	261.2	269.4	263.0	22.4	22.4	22.0	22.0	22.0
Peru	315.0	329.0	311.4	320.0	409.0	32.0	32.0	29.0	29.0	29.0
United States	551.4	532.5	501.0	476.8	473.8	40.7	38.1	42.5	39.9	
Other	23.7	31.9	41.2	56.0	58.0	5.0	5.0	5.0	5.0	5.0
Total	2 378.3	2 495.5	2 469.1	2 477.0	2 632.0	225.6	213.2	215.0	208.9	
AUSTRALASIA										
Australia	509.9	487.2	452.6	502.2	434.5	33.5	29.8	22.9	29.9	
New Zealand	-	-	-	2.0	2.0					
Total	509.9	487.2	452.6	504.2	436.5	33.5	29.8	22.9	29.9	
TOTAL	4 267.6	4 379.2	4 326.5	4 394.7	4 537.8	395.6	377.2	364.2	359.0	
<i>Monthly Average</i>	<i>355.6</i>	<i>364.9</i>	<i>360.5</i>	<i>366.2</i>	<i>378.2</i>					
OTHER COUNTRIES										
U.S.S.R.*	530.0	550.0	610.0	620.0	636.0	53.0	53.0	54.0	54.0	54.0
Germany, Democratic Republic*	10.0	10.0	5.0	5.0	4.8	0.4	0.4	0.4	0.4	0.4
Bulgaria	77.0	76.4	80.0	80.0	84.0	7.0	7.0	7.3	7.3	7.3
Poland	229.2	241.2	236.4	222.4	227.0	19.0	19.0	19.0	19.0	19.0
Other Eastern Europe*	60.0	66.0	60.0	60.0	60.0	5.0	5.0	5.0	5.0	5.0
China*	100.0	100.0	110.0	110.0	108.0	9.0	9.0	9.1	9.1	9.1
North Korea*	125.0	130.0	140.0	150.0	160.0	13.6	13.6	13.7	13.7	13.7
Total	1 131.2	1 167.6	1 241.4	1 247.4	1 279.8	107.0	107.0	108.5	108.5	108.5
WORLD TOTAL	5 398.8	5 546.8	5 567.9	5 642.1	5 817.6	502.6	484.2	472.7	467.5	
<i>Monthly Average</i>	<i>449.9</i>	<i>462.2</i>	<i>464.0</i>	<i>470.2</i>	<i>484.8</i>					

In this table the accounting is based on the zinc content by analysis of zinc ores and concentrates plus the zinc content of mixed ores and concentrates known to be intended for treatment for zinc recovery. Some of the data for latest months are estimated.

Notes (1) Exports

World Slab Production

THOUSAND METRIC TONS

	1969	1970	1971	1972	1973	1973		1974		
						Nov	Dec	Jan	Feb	Mar
EUROPE										
Austria	15.7	15.7	16.0	16.9	16.7	1.4	1.4	1.5	1.3	1.4
Belgium	257.4	231.9	207.9	254.2	276.3	23.5	21.8	23.0	18.6	21.8
Finland	1.1	55.8	63.7	81.1	79.9	7.0	8.3	9.0	6.7	7.0
France	253.5	223.7	218.7	261.5	258.1	21.4	23.3	24.7	20.4	24.3
Germany, Federal Republic	279.2	301.2	262.6	358.7	395.0	32.3	32.5	34.5	32.2	33.0
Italy	130.3	142.1	138.9	155.9	173.1	14.2	13.5	15.0	11.0	17.0
Netherlands	46.3	46.7	44.0	48.3	44.9	4.3	3.8	3.0	3.5	3.6
Norway	58.9	61.4	62.4	73.3	80.6	6.8	6.9	6.6	4.9	6.6
Spain	86.2	94.1	97.1	108.0	110.8	9.7	10.9	10.9	10.0	11.6
United Kingdom	151.0	146.6	116.5	73.8	83.8	6.9	6.6	6.3	7.3	6.9
Yugoslavia	81.0	61.1	45.5	48.6	55.0	4.4	4.1	4.6		
Total ..	1 360.6	1 380.3	1 273.3	1 480.3	1 574.2	131.9	133.1	139.1		
AFRICA										
S. and S.W. Africa	11.8	26.9	43.4	47.2	53.1	4.7	4.5	4.9		
Zaire*	64.0	64.0	63.0	67.0	64.0	5.0	5.0	5.0	5.0	5.0
Zambia	50.2	54.3	57.1	56.2	53.4	4.5	4.2	4.7	4.8	5.3
Total ..	126.0	145.2	163.5	170.0	170.5	14.2	13.7	14.6		
ASIA										
Japan	712.2	676.3	716.4	804.8	842.8	69.6	67.2	68.2	61.1	
India	23.1	23.4	21.2	25.2	24.0	2.0	2.0	2.0	2.0	2.0
S. Korea	2.3	2.3	9.2	15.0	18.0	1.5	1.5	1.5	1.5	1.5
Total ..	737.6	702.0	746.8	845.0	884.2	73.1	70.7	71.7		
AMERICA										
Canada	423.1	417.0	372.5	476.2	532.5	45.7	37.7	46.4	43.1	40.8
U.S.A.	1 008.0	866.3	768.7	567.4	521.9	42.6	44.6	41.2	39.9	42.9
Argentina	25.0	39.0	31.9	40.8	37.1	1.9	2.0	2.2		
Brazil	5.0	11.0	15.0	16.0	20.0	1.5	1.5	1.5	1.5	1.5
Mexico	83.2	80.7	83.4	83.8	76.0	7.0	7.0			
Peru	64.8	71.0	59.1	60.0	67.6	5.0	5.0			
Total ..	1 609.1	1 485.9	1 330.6	1 244.2	1 255.1	103.7	97.8	103.3		
AUSTRALIA	249.2	263.9	265.7	302.6	294.1	26.0	20.2	26.8	20.5	11.2
TOTAL	4 082.5	3 977.3	3 779.9	4 042.1	4 178.2	348.9	335.5	355.5		
<i>Monthly Average</i>	<i>340.2</i>	<i>331.4</i>	<i>315.0</i>	<i>336.8</i>	<i>348.2</i>					
OTHER COUNTRIES										
Bulgaria	75.8	76.1	78.4	80.0	87.0	7.2	7.2	7.5	7.5	7.5
Germany, Democratic Republic*	15.0	15.0	15.0	15.0	18.0	1.5	1.5	2.0	2.0	2.0
Poland	207.5	209.0	220.1	215.6	225.0	18.8	18.8	19.0	19.0	19.0
U.S.S.R.*	550.0	570.0	635.0	650.0	720.0	60.0	60.0	60.0	60.0	60.0
Other Eastern Europe*	60.0	60.0	60.0	60.0	60.0	5.0	5.0	5.0	5.0	5.0
China P.R.*	100.0	100.0	110.0	120.0	132.0	11.0	11.0	11.0	11.0	11.0
North Korea	80.0	90.0	100.0	120.0	84.0	7.0	7.0	7.0	7.0	7.0
Total ..	1 088.3	1 120.1	1 218.5	1 260.6	1 326.0	110.5	110.5	111.5	111.5	111.5
WORLD TOTAL	5 170.8	5 097.4	4 998.4	5 302.7	5 504.2	459.4	446.0	467.0		
<i>Monthly Average</i>	<i>430.9</i>	<i>424.8</i>	<i>416.5</i>	<i>441.9</i>	<i>458.7</i>					

This table is based on the total production of slab zinc by smelters and refineries, including production on toll in the reporting country, regardless of the type of source material, i.e. whether ores, concentrates, residues, slag or scrap. Remelted zinc and zinc dust are excluded. Some of the data for the latest months are provisional.

ZINC

World Slab Consumption

THOUSAND METRIC TONS

	1969	1970	1971	1972	1973	1973			1974	
						Oct	Nov	Dec	Jan	Feb
EUROPE										
Austria	19.4	22.7	19.8	20.9	21.4	1.8	1.8	1.8		
Belgium	150.4	127.5	130.9	139.2	161.2	12.7	12.7	12.7		
Denmark	11.6	12.4	9.9	12.8	12.8	1.1	1.1	1.1		
Finland	0.3	11.6	7.8	11.0	16.0	1.1	1.1	1.1		
France	239.0	220.2	225.4	264.1	290.4	25.9	27.1	22.5		
Germany, Federal Republic	400.2	395.7	387.5	413.1	438.2	34.6	34.9	34.6		
Greece	5.2	8.0	8.0	10.0	12.0	1.0	1.0	1.0		
Irish Republic	5.0	5.0	6.0	3.0	4.0	0.3	0.3	0.4		
Italy	167.0	178.0	170.0	203.0	215.0	18.0	18.0	18.0		
Netherlands	34.3	37.2	36.0	35.0	36.0	3.0	3.0	3.0		
Norway	23.0	24.0	25.0	25.0	26.0	2.1	2.1	2.1		
Portugal	5.0	10.0	10.0	11.0	12.0	0.6	0.6	0.6		
Spain	75.1	83.7	93.3	101.0	97.5	8.1	8.1	8.1		
Sweden	38.1	33.9	32.9	33.5	41.0	3.2	3.2	3.2		
Switzerland	30.8	27.3	25.7	32.7	29.7	3.4	1.7	1.6	1.9	
United Kingdom	288.9	277.8	273.7	279.3	305.4	27.2	25.8	23.6	21.5	22.0
Yugoslavia	59.8	51.4	53.5	51.7	57.0	5.0	5.0	4.7		
Total ..	1 559.3	1 526.4	1 515.9	1 652.3	1 775.6	150.1	147.5	140.1		
AFRICA										
South and South West Africa ..	45.3	54.9	53.9	51.0	61.0	5.0	5.9	5.2	5.8	
Other	24.0	24.0	24.0	38.0	37.0	3.0	3.0	3.0	3.0	
Total ..	69.3	78.9	77.9	89.0	98.0	8.0	8.9	8.2	8.8	
ASIA										
India	78.0	83.0	90.0	104.0	123.0	10.0	10.0	10.0	10.0	
Japan	595.1	618.7	620.7	713.0	822.0	65.0	72.0	75.0	65.0	60.0
Turkey	8.0	8.0	12.0	12.0	12.0	1.0	1.0	1.0		
Other	133.0	127.0	145.0	134.0	144.0	12.0	12.0	12.0	12.0	
Total ..	814.1	836.7	867.7	963.0	1 101.0	88.0	95.0	98.0		
AMERICA										
Canada	115.5	106.4	110.8	124.9	134.8	14.4	12.7	10.9	10.0	
U.S.A.	1 251.7	1 074.3	1 135.9	1 285.7	1 350.3	122.6	106.8	95.7	106.9	
Argentina	31.0	34.0	34.0	34.0	30.0	2.5	2.5	2.5	2.5	
Brazil	50.0	48.0	52.0	75.0	72.0	6.0	6.0	6.0	6.0	
Mexico	44.3	47.8	42.4	48.8	48.0	4.0	4.0	4.0	4.0	
Peru	4.0	5.0	5.0	6.0	33.4	3.0	3.0	3.0	3.0	
Other	30.0	30.0	39.0	32.0	31.0	2.5	2.5	2.5	2.5	
Total ..	1 526.5	1 345.5	1 411.1	1 606.4	1 699.5	155.0	137.5	124.6	134.9	
AUSTRALASIA										
Australia ..	108.1	97.7	109.9	112.8	112.2	11.2	13.1	8.9	12.0	12.3
New Zealand ..	8.0	15.0	13.0	9.0	12.0	1.0	1.0	1.0	1.0	1.0
Total ..	116.1	112.7	122.9	121.8	124.2	12.2	14.1	9.9	13.0	13.3
TOTAL	4 085.3	3 900.2	3 995.5	4 432.5	4 798.3	413.3	403.0	380.8		
<i>Monthly Average</i>	<i>340.4</i>	<i>325.0</i>	<i>333.0</i>	<i>369.4</i>	<i>399.9</i>					
OTHER COUNTRIES*										
Czechoslovakia ..	40.1	45.0	45.0	50.0	54.0	4.5	4.5	4.5	4.5	4.5
Germany, Democratic Republic ..	75.0	79.0	80.0	80.0	84.0	7.0	7.0	7.0	7.0	7.0
Poland	125.8	129.4	140.3	140.0	144.0	12.0	12.0	12.0	12.0	12.0
U.S.S.R.	500.0	510.0	560.0	575.0	570.0	47.5	47.5	47.5	47.5	47.5
Other Eastern Europe ..	65.0	77.0	80.0	80.0	84.0	7.0	7.0	7.0	7.0	7.0
China P.R.	135.0	150.0	170.0	175.0	174.0	14.5	14.5	14.5	14.5	14.5
Other Asia	10.0	15.0	20.0	20.0	24.0	2.0	2.0	2.0	2.0	2.0
Total ..	950.9	1 005.4	1 095.3	1 120.0	1 134.0	94.5	94.5	94.5	94.5	94.5
WORLD TOTAL	5 036.2	4 905.6	5 090.8	5 552.5	5 932.3	507.8	497.5	475.3		
<i>Monthly Average</i>	<i>419.7</i>	<i>408.8</i>	<i>424.2</i>	<i>462.7</i>	<i>494.4</i>					

In this table the accounting is based on the consumption of slab zinc. Remelted zinc and zinc dust are excluded. Some of the data for latest months are provisional.

World Trade — Slab Zinc

THOUSAND METRIC TONS

	1969	1970	1971	1972	1973			1974	
					Jan-Dec	Nov	Dec	Jan	Feb
EXPORTS									
Austria	1.9	0.3	0.6	0.8	1.1	0.1	—		
Belgium/Luxembourg	155.5	137.3	126.8	192.6	221.7	16.1	21.7		
Bulgaria	38.8	38.3	38.3*	28.5	19.5 ⁽⁷⁾				
Denmark	—	0.1	0.2	0.1	—	—	—	—	0.1
Finland	0.1	8.5	50.1	67.8	64.2	6.3	7.8	1.3	6.6
France	20.3	16.4	29.3	47.6	37.1	2.8	3.2	2.4	1.9
Germany, Federal Republic	30.6	47.5	38.6	91.2	91.6	5.2	6.3	6.9	6.2
Italy	0.8	1.9	0.1	0.1	5.0	0.1	4.4		
Netherlands	25.7	23.2	28.4	43.7	34.7 ⁽⁹⁾	2.4	3.4		
Norway	41.7	40.2	42.4	49.5	54.4	3.7	5.4	3.1	5.0
Poland	81.8	79.4	76.9	84.1	84.4	6.0	9.0		
Spain ⁽¹⁾	4.2	3.6	21.6	5.8	1.0 ⁽⁷⁾				
U.K.	13.7	11.9	7.8	13.3	20.1	1.1	1.6	0.5	
U.S.S.R.	85.7	95.3	124.0	123.2	146.3	17.1	21.8	5.7	
Yugoslavia	30.4	21.9	19.7	21.7	10.0 ⁽⁵⁾				
Zaire	63.7*	63.7*	62.7*	66.3					
Zambia	50.6	48.2	49.5	59.5	49.0	2.8	2.5	3.8	0.8
Japan	94.5	52.6	63.0	106.6	64.0	3.1	3.5	4.6	3.5
Canada	278.9	318.8	283.2	370.4	420.7	40.0	30.2	29.9	27.5
Mexico	38.3	35.9	38.6	40.3					
Peru	58.0	65.3	50.6	58.2	14.5 ⁽⁵⁾				
U.S.A.	8.4	0.3	12.1	3.9	13.3	3.0	4.1	2.8	3.2
Australia	140.6	145.0	163.6	204.3	134.2 ⁽⁶⁾				
Total ..	1 264.2	1 255.6	1 334.1	1 679.5	1 486.8				
IMPORTS									
Austria	6.8	6.6	4.4	4.8	7.3	0.7	0.6		
Belgium/Luxembourg	41.7	29.3	35.0	39.3	67.0	5.5	10.4		
Denmark	11.8	13.5	8.8	13.1	13.1	0.7	1.1	1.5	1.1
Finland	9.2	2.7	1.6	2.0	1.2	0.1	—	—	—
France	25.4	24.8	29.0	50.8	58.1	5.6	5.2	6.2	5.6
Germany, Federal Republic	175.1	148.1	164.3	133.5	106.6	6.4	7.6	10.1	6.1
Greece	10.8	8.3	7.4	11.7	14.7 ⁽²⁾				
Irish Republic ⁽²⁾	4.6	2.8	3.1	3.9	4.1 ⁽⁸⁾				
Italy ⁽³⁾	39.0	44.0	32.6	38.0	48.5	2.2	5.0		
Netherlands	16.4	14.1	21.3	19.2	30.6 ⁽⁹⁾	3.3	2.2		
Norway	4.4	1.7	0.9	0.5	0.5	—	—	0.1	0.3
Switzerland	31.0	27.4	25.9	32.8	28.4	1.7	1.6	1.9	1.6
Sweden	39.1	34.0	31.6	38.9	40.8	3.0	2.1	3.1	
U.K.	162.2	160.8	171.7	224.7	219.7	12.4	18.4	12.0	
U.S.S.R.	47.3	49.4	47.4	50.7	45.6	2.5	4.7	0.7	
Yugoslavia	11.7	13.2	19.3	23.7					
South Africa	8.5	24.9	17.4	6.7	0.9 ⁽⁷⁾				
India	26.3	51.8	65.8	62.8	12.4 ⁽⁴⁾				
Japan	8.2	21.9	13.9	7.8	27.8	5.4	9.0	4.3	4.9
U.S.A.	294.5	245.3	289.9	474.1	534.1	43.7	42.9	51.0	44.8
Total ..	974.0	924.6	991.3	1 239.0	1 261.4				

This table shows principal imports and exports of slab zinc. More detailed information including countries of origin of imports and destination of exports may be found for the major countries in the appropriate country tables. Cumulative quarterly totals shown represent information available at time of going to press.

- Notes (1) Includes Scrap Zinc
 (2) Includes Alloy
 (3) Includes Hard Spelter
 (4) January to March
 (5) January to June
 (6) January to August
 (7) January to September
 (8) January to October
 (9) Includes trade between the Netherlands and Belgium to November

ZINC

East/West Trade—Slab Zinc

THOUSAND METRIC TONS

	1969	1970	1971	1972	1973	1973			1974
						Oct	Nov	Dec	Jan
EXPORTS FROM WESTERN COUNTRIES									
Belgium	0.2	-	-	1.9	0.5	-	-	-	-
Germany, Federal Republic	2.0	1.5	0.5	0.2	0.8	0.5	-	-	-
Netherlands	0.6	0.3	0.7	0.6	-	-	-	-	-
Spain ⁽³⁾	0.7	0.4	2.2	0.5	- ⁽⁴⁾	-	-	-	-
Yugoslavia	2.2	3.1	8.8	15.8	-	-	-	-	-
Japan	6.9	-	0.7	-	-	-	-	-	-
Canada	-	5.1	-	-	-	-	-	-	-
Peru	-	-	3.0	4.8	-	-	-	-	-
Australia	12.2	9.1	-	-	-	-	-	-	-
TOTAL	24.8	19.5	15.9	23.8	1.3⁽²⁾	0.5⁽²⁾	-⁽²⁾	-⁽²⁾	-⁽²⁾
of which to:									
Czechoslovakia	4.1	4.7	8.8	15.8	0.1	-	-	-	-
Germany, Democratic Republic	1.4	0.4	2.7	0.5	-	-	-	-	-
Hungary	0.2	0.2	0.7	0.8	0.3	-	-	-	-
Roumania	-	-	-	1.9	-	-	-	-	-
China P.R.	19.1	14.2	3.7	4.8	0.2	-	-	-	-
North Korea	-	-	-	-	0.7	0.5	-	-	-
TOTAL	24.8	19.5	15.9	23.8	1.3⁽²⁾	0.5⁽²⁾	-⁽²⁾	-⁽²⁾	-⁽²⁾
EXPORTS FROM EASTERN COUNTRIES⁽¹⁾									
Bulgaria	29.6	28.8	38.3	28.5	16.9 ⁽⁴⁾	-	-	-	-
Czechoslovakia	0.1	-	-	-	-	-	-	-	-
Germany, Democratic Republic	6.0	3.8	3.7	1.7	0.1	-	-	-	-
Hungary	0.2	-	-	-	0.5	0.1	-	-	-
Poland	37.8	28.0	28.0	33.2	31.8	1.8	3.5	5.4	1.7
Roumania	5.8	2.4	2.8	5.5	1.9	-	-	-	-
U.S.S.R.	23.7	24.6	50.2	52.4	45.8 ⁽⁴⁾	-	-	-	-
China P.R.	-	-	0.1	-	-	-	-	-	-
North Korea	19.3	10.8	33.6	39.5	51.4	6.9	3.7	4.4	2.5
TOTAL	122.5	98.4	156.7	160.8	148.4⁽²⁾	8.8⁽²⁾	7.2⁽²⁾	9.8⁽²⁾	4.2⁽²⁾
of which to:									
Australia	2.8	3.5	2.6	2.7	3.2	0.2	0.2	0.3	0.2
Belgium	7.0	2.0	7.2	8.8	19.8 ⁽⁵⁾	3.4	-	-	-
Denmark	0.1	0.2	-	0.2	-	-	-	-	-
Finland	2.8	4.2	1.7	-	0.2	-	-	-	-
France	4.6	4.7	10.3	20.0	10.9	0.3	0.3	1.1	0.6
Germany, Federal Republic	17.2	9.7	11.0	6.7	5.0 ⁽⁵⁾	0.3	0.3	-	-
Greece	-	-	-	-	0.5	-	-	-	-
Irish Republic	-	0.3	-	-	-	-	-	-	-
Italy	3.8	4.8	5.5	3.0	3.0	-	-	-	-
Netherlands	8.3	10.9	25.6	34.8	25.3	-	1.0	1.6	0.3
Norway	3.1	0.4	0.8	-	0.6	-	-	0.1	-
Spain ⁽³⁾	3.1	1.2	0.5	2.0	- ⁽⁴⁾	-	-	-	-
Sweden	9.0	4.2	7.8	5.4	3.0	-	-	-	-
Switzerland	7.1	2.5	5.9	5.1	5.6	0.9	0.2	0.4	-
United Kingdom	22.9	17.4	44.3	30.4	26.8	0.3	0.3	1.1	0.3
Yugoslavia	1.4	2.8	-	-	-	-	-	-	-
Egypt	2.6	3.8	3.6	2.1	0.3	-	-	-	-
Iran	-	-	2.4	1.9	0.7	-	-	-	-
Morocco	-	0.2	0.1	0.3	-	-	-	-	-
Turkey	0.7	-	-	0.1	-	-	-	-	-
India	9.9	9.5	13.0	19.6	13.3	-	-	-	0.6
Japan	5.4	7.0	8.8	7.4	16.9	2.5	2.9	3.7	1.9
Pakistan	1.0	0.5	-	0.3	-	-	-	-	-
Brazil	-	2.4	1.1	-	-	-	-	-	-
U.S.A.	9.7	6.2	4.5	10.0	13.2	0.9	2.0	1.5	0.3
Unknown	-	-	-	-	0.1	-	-	-	-
TOTAL	122.5	98.4	156.7	160.8	148.4⁽²⁾	8.8⁽²⁾	7.2⁽²⁾	9.8⁽²⁾	4.2⁽²⁾

Notes: (1) Data for Bulgaria, Poland and the U.S.S.R. are the official exports reported by these countries. Data for other countries are based on Imports reported by Western Countries

(2) Totals shown represent information available at time of going to press

(3) Including Scrap

(4) January to September

(5) January to November

Principal End Uses

THOUSAND METRIC TONS

	1969	1970	1971	1972	1973	1973		
						Apr-June	July-Sept	Oct-Dec
AUSTRALIA (Primary Zinc only)								
Galvanizing	67.3	57.4	64.9	72.6	29.8 ⁽²⁾	17.9		
Diecasting Alloys	13.3	13.6	13.4	13.1	7.4 ⁽²⁾	4.5		
Brass	9.4	8.6	9.0	9.5	6.0 ⁽²⁾	3.8		
Rolled Zinc	3.7	2.3	3.4	3.6	1.6 ⁽²⁾	1.0		
Zinc Oxide	4.7	6.6	6.2	6.0	3.0 ⁽²⁾	2.3		
Zinc Dust	2.0	1.8	2.0	3.4	1.8 ⁽²⁾	1.2		
Miscellaneous	1.8	2.0	1.8					
Total ..	102.2	92.3	100.7	108.2	49.6 ⁽²⁾	30.7		
AUSTRIA (Slab Zinc)								
Galvanizing	8.5	9.0	10.0	10.0	15.9			
Copper Alloy Castings	2.0	3.0	1.5	3.0	3.7			
Copper Alloy Semi-Manufactures	3.4	4.9	4.7	4.9	4.7			
Rolled Zinc	1.7	1.5	0.8	0.6	1.3			
Oxides	1.6	1.3	1.3	0.9	1.4			
Other Chemical Uses	1.5	1.3	1.4	1.2	1.2			
Other Uses		1.0						
Total ..	18.7	22.0	19.7	20.6	28.2 ⁽³⁾			
BELGIUM								
Galvanizing	77.1	73.5	72.4	91.8				
Brass	19.0	19.7	15.8	18.6				
Rolled Zinc/Alloy for Diecasting	49.0	50.0	38.0	41.0				
Chemical Uses (Oxides)	5.3	5.3	5.3	5.0				
Total ..	150.4	148.5	132.5	156.4				
of which: Slab Zinc ..	150.4	127.5	130.9	139.2				
CANADA (Primary Zinc only)								
Galvanizing	42.7	48.7	50.4	54.0				
Diecasting Alloys	29.2	15.9	18.6	18.6				
Brass	14.9	10.9	12.5	13.7				
Other Uses	20.9	20.4	23.2	25.7				
Total ..	107.7	95.9	104.7	112.0				
FINLAND								
Galvanizing		4.8	3.3	5.5	4.1 ⁽²⁾			
Brass		3.2	3.3	4.1	2.4 ⁽²⁾			
Other		1.0	1.4	1.5	0.7 ⁽²⁾			
Total ..		9.0	8.0	11.1	7.2 ⁽²⁾			
FRANCE								
Galvanizing	79.4	76.5	81.0	94.1				
Die Casting Alloys	41.5	35.9	34.1	39.0				
Copper Alloy Castings	4.7	5.9	4.6	5.8				
Copper Alloy Semi-Manufactures	57.7	65.1	65.3	65.6				
Rolled Zinc	72.3	65.3	68.8	77.9				
Zinc Wire and Tubes	4.1	4.1	3.9	4.4				
Oxides	35.5	32.0	32.5	32.5				
Other Chemical Uses	16.0	15.0	15.5	12.5				
Miscellaneous	2.0	2.0	2.0	2.0				
Total ..	313.2	301.8	307.7	333.8				
of which: Slab Zinc ..	239.0	220.2	225.4	264.1				
GERMANY								
Galvanizing	139.4	137.8	141.2	154.5	160.1	42.1	36.8	39.6
Diecasting Alloys	78.1	83.3	77.4	74.8	92.2	21.1	24.3	25.6
Brass	153.7	142.7	128.6	137.4	135.2	40.6	26.4	27.0
Rolled Zinc	69.3	58.4	68.1	62.5	63.4	17.0	12.3	15.3
Oxides	31.7	27.4	32.7	30.6	19.6	8.4	1.6	1.6
Miscellaneous	0.9	2.1	6.9	6.1	8.7	2.0	4.5	0.0
Total ..	473.1	451.7	454.9	465.9	479.2	131.2	105.9	109.1
of which: Slab Zinc ..	400.2	395.7	387.5	413.1	438.2	108.9	101.5	104.1

ZINC

Principal End Uses

THOUSAND METRIC TONS

	1960	1970	1971	1972	1973	1973		
						Apr-June	July-Sept	Oct-Dec
ITALY								
Galvanizing	79.0	81.0	87.0	95.0				
Diecasting Alloys .. .	37.0	43.1	45.2	43.3				
Rolled Zinc and Zinc Wire .. .	10.0	12.9	11.7	10.9				
Copper Alloy Semi-Manufactures .. .	61.5	68.5	64.1	78.1				
Copper Alloy Castings .. .	16.0	16.2	15.0	15.7				
Oxides and Other Chemicals .. .	21.1	23.3	20.9	22.6				
Miscellaneous .. .	3.3	4.0	4.1	3.4				
Total .. .	228.0	249.0	248.0	275.0				
of which: Slab Zinc .. .	167.0	178.0	179.0	203.0				
JAPAN (Slab Zinc and Secondary Distilled Zinc)								
Galvanizing .. .	327.6	337.3	338.4	335.7	376.6	93.9	96.0	95.5
Diecasting Alloys .. .	118.1	115.5	115.4	143.9	168.7	42.8	41.6	42.0
Brass .. .	73.2	76.9	76.4	89.9	104.7	25.6	25.4	27.6
Rolled Zinc .. .	31.6	35.6	26.9	31.8	35.2	8.4	9.6	9.0
Zinc Oxide .. .	16.0	19.8	18.4	19.1	21.2	5.3	5.2	5.3
Miscellaneous .. .	33.4	38.1	43.6	49.9	47.8	13.7	12.5	8.5
Total .. .	599.9	623.2	624.1	670.3	754.2	189.7	190.3	187.9
NETHERLANDS (Estimated)								
Galvanizing .. .	13.0	13.0	13.0					
Diecasting Alloys .. .	4.0	5.0	4.0					
Brass .. .	11.0	13.0	13.0					
Other Uses .. .	15.0	21.0	20.0					
Total .. .	43.0	52.0	50.0					
of which: Slab Zinc .. .	34.3	37.2	36.0					
SOUTH AFRICA (Slab Zinc only)								
Galvanizing .. .	..	39.5	36.0	36.2				
Zinc Alloys for Diecasting .. .	..	5.0	5.0	4.7				
Brass .. .	..	7.0	7.0	6.5				
Rolled Zinc .. .	..	0.5	0.5	0.4				
Zinc Oxide .. .	..	3.0	3.0	2.7				
Miscellaneous .. .	..	-	0.5	0.5				
Total .. .	..	55.0	54.0	51.0				
SWEDEN								
Galvanizing .. .	22.5	25.0	24.0					
Zinc Alloys .. .	2.6	2.8	2.0					
Brass .. .	20.1	20.5	17.0					
Zinc Oxide .. .	2.2	2.4	2.6					
Total .. .	47.4	50.7	45.6					
of which: Slab Zinc .. .	38.1	33.9	32.9					
UNITED KINGDOM								
Galvanizing .. .	99.0	96.4	98.6	100.0	102.1	25.6	24.0	25.5
Diecasting Alloys .. .	77.5	74.7	63.4	73.0	79.6	19.8	20.6	19.2
Brass .. .	116.4	107.3	96.1	95.5	109.2	27.8	24.9	28.4
Rolled Zinc .. .	27.2	25.8	26.4	25.2	28.8	6.3	6.0	8.8
Oxides .. .	34.6	36.2	35.3	36.2	42.3	10.6	10.5	10.1
Zinc Dust .. .	13.9	15.6	15.6	16.4	14.8	3.6	3.3	4.3
Miscellaneous .. .	13.7	14.3	13.4	14.5	14.7	3.9	3.7	3.5
Total .. .	382.3	370.3	354.8	361.8	391.5	97.6	93.0	99.8
of which: Slab Zinc .. .	288.9	277.8	273.7	279.3	305.4	75.7	72.4	76.7
U.S.A. (Slab Zinc and Remelted)								
Galvanizing .. .	447.6	430.2	430.7	470.1	480.0	127.2	119.8	112.0
Diecasting Alloys .. .	522.9	420.6	468.2	526.0	542.1	149.7	129.8	128.4
Brass .. .	162.8	115.9	136.5	174.3	178.0	43.8	38.0	47.0
Rolled Zinc .. .	44.1	37.3	35.2	41.0	35.5	9.0	8.0	9.2
Oxides .. .	37.6	39.8	35.3	47.2	54.1	11.8	14.3	14.6
Miscellaneous .. .	41.8	33.0	30.7	28.1	61.0	16.5	14.4	14.2
Total .. .	1 256.8	1 076.8	1 137.6	1 286.7	1 350.7⁽¹⁾	349.0⁽¹⁾	324.3⁽¹⁾	325.4⁽¹⁾
of which: Slab Zinc .. .	1 251.7	1 074.3	1 136.9	1 285.7	1 350.3	348.0	324.2	325.2

This table illustrates principal uses of zinc in those countries for which information is available. For some countries, annual statistics only are prepared. Unless otherwise indicated, the statistics cover total use of zinc in all forms, including the direct use of zinc contained in scrap.

Note: (1) Quarterly figures include estimates of consumption by companies reporting on an annual basis only, which are included under the appropriate end uses by the annual figures.

(2) January to June.

(3) Total consumption in all forms.

METRIC TONS

Australia	1969	1970	1971	1972	1973			
					Jan-Dec	Oct	Nov	Dec
UNWROUGHT								
Production								
Ores and Concentrates (Content by analysis)	509 902	487 206	452 646	502 186	434500	36400	33500	29800
Slab Zinc Total ..	249 158	263 911	265 741	302 600	294 100	26000	26000	20200
Primary	242 634	256 058	258 658	294 672				
Secondary	6 524	7 853	7 043	7 928				
Zinc Dust	3 689	4 534	5 468					
Exports								
Ores and Concentrates (Zinc content) Total ..	190 360	244 374	195 204	142 794	134 055 ⁽¹⁾			
of which to:								
Belgium	8 646	12 647	19 639	6 924	9 435			
Finland	-	-	16 274	30 089	8 560			
Japan	67 392	83 953	48 073	54 821	65 788			
Norway	10 335	16 417	11 010	10 712	14 262			
United Kingdom	91 472	113 456	79 989	21 406	13 931			
Other Countries	12 515	17 901	20 219	18 842	22 079			
Slab Zinc Total ..	140 770	145 336	155 194	206 128	195 104	16 764	13 813	10 507
of which to:								
China P.R.	12 193	9 112	-	-	-	-	-	-
India	5 130	16 304	23 588	21 577	21 760	2 502	500	1 000
New Zealand	13 852	15 075	13 632	22 017	20 964	2 463	2 114	660
Philippines	8 719	6 573	3 629	4 438	5 192	777	701	955
Taiwan	4 135	4 856	6 714	10 965	19 011	2 023	1 952	1 469
Thailand	10 995	11 713	12 538	15 697	14 900	1 837	2 812	-
United Kingdom	16 620	14 345	32 398	47 166	34 991	1 150	1 209	1 266
U.S.A.	31 352	28 712	33 207	40 093	35 796	2 556	1 154	50
Other Countries	37 774	38 646	29 488	44 175	42 490	3 456	3 371	5 107
Consumption								
Slab Zinc Primary	108 100	97 700	109 900	112 800	112 200	11 200	13 100	8 900
MANUFACTURES								
Exports								
Bars, Rods and Angles	643	1 153	580					
Plate, Sheet and Circles	254	440	602	551				
Powder and Flakes	188	239	660					

Note (1) January to August

Canada	1969	1970	1971	1972	1973			
					Jan-Dec	Oct	Nov	Dec
UNWROUGHT								
Production								
Ores and Concentrates (Content by analysis)	1 170 397	1 253 096	1 270 260	1 278 579	1 351 036	118 595	119 497	109 672
Recoverable content	1 095 545	1 135 715	1 113 738	1 128 666	1 231 481	115 593	102 923	86 695
Slab Zinc	423 067	417 907	372 529	476 168	532 553	45 667	45 724	37 720
Exports								
Ores and Concentrates (Zinc content) Total ..	729 980	809 249	785 871	695 088	838 662	65 186	72 263	74 105
of which to:								
Belgium	141 881	171 318	240 253	172 938	267 271	29 824	4 034	36 749
France	41 102	34 346	42 276	48 793	44 847	10	18 596	-
Germany F.R.	100 656	31 844	54 529	107 862	103 651	10 228	7 075	3 273
Netherlands	4 538	76 400	35 279	31 508	48 270	6 476	3 889	5 275
Japan	60 666	135 367	138 864	136 286	192 299	1 126	21 982	8 066
U.S.A.	347 613	307 423	213 549	137 776	122 589	9 474	13 758	10 976
Other Countries	33 524	52 551	61 121	59 925	59 735	8 048	2 929	9 766
Slab Zinc Total ..	278 864	318 834	283 248	370 411	420 681	41 096	39 965	30 198
of which to:								
Brazil	10 140	5 161	8 407	4 857	5 149	25	1 391	-
Germany F.R.	11 890	9 241	8 530	4 187	1 323	-	-	-
India	5 637	26 120	15 009	10 907	1 798	-	-	-
Philippines	3 136	5 831	5 830	346	614	99	108	36
United Kingdom	75 200	86 318	58 947	78 342	62 961	4 656	9 038	5 976
U.S.A.	133 978	110 048	143 609	247 550	316 124	33 654	25 911	22 855
Other Countries	38 883	76 055	42 916	35 222	32 712	2 662	3 517	1 331
Consumption								
Slab Zinc	115 461	106 406	110 825	124 918	134 750	14 408	12 733	10 888
MANUFACTURES								
Imports								
Sheet, Strip, Bars and Rods	466	575	463	433	502	35	73	29
Dust	1 191	645	1 205	1 216	814	111	108	111
Oxide	2 322	1 981	2 150	2 411	2 208	265	94	224
Sulphate	2 309	1 504	1 269	1 008	1 017	78	73	160

ZINC

France

METRIC TONS

	1970	1971	1972	1973	1974			
					Jan-Mar	Jan	Feb	Mar
UNWROUGHT								
Production								
Ores and Concentrates (Zinc content) ..	18 600	15 142	13 286	13 335	3 468	1 130	1 120	1 218
Slab Zinc Total ..	223 700	218 700	251 500	258 100	69 446	24 689	20 440	24 317
of which: High Grade	123 900	129 602	159 201	93 537 ⁽¹⁾				
Remelted	27 700	23 700	22 860					
Imports								
Ores and Concentrates Total ..	411 148	384 844	436 520	465 179	114 610	47 033	36 464	31 063
of which from:								
Belgium	4 685	1 227	3 511	13 211	12 344	2 036	3 816	6 492
Germany	11 122	812	272	8 750	2 510	568	546	1 396
Greece	11 661	15 870	10 566	4 991	-	-	-	-
Irish Republic	73 214	51 824	47 765	41 229	11 330	4 538	6 792	-
Sweden	34 731	45 985	-	28 987	4 692	3 063	1 210	419
Burma	-	-	-	7 929	965	965	-	-
Iran	4 129	6 380	18 134	26 319	5 186	-	3 673	1 513
Congo Republic	-	-	-	9 732	-	-	-	-
Morocco	35 673	27 553	35 479	27 120	2 465	283	1 238	944
Canada	126 507	137 404	169 217	145 092	45 413	18 139	11 725	15 548
Peru	90 907	82 890	115 072	124 829	26 588	15 723	7 368	3 497
Other	16 198	21 479	54 633	70 970	3 117	1 768	96	1 254
Slab Zinc Total ..	24 768	29 015	50 753	58 089	17 881	6 162	5 602	6 117
of which from:								
Belgium	7 821	3 809	5 215	24 502	7 462	1 771	1 919	3 772
Bulgaria	4 746	3 735	3 714	4 627	1 223	-	499	724
Germany, F.R.	1 205	2 473	3 793	5 553	1 956	824	853	279
Netherlands	4 502	3 636	8 646	6 603	2 161	651	823	687
Norway	476	865	2 129	1 331	875	376	250	249
U.S.S.R.	1 103	5 052	3 702	3 708	1 328	1 277	-	51
Canada	2 359	1 182	795	1 298	331	18	110	203
N. Korea	-	7 168	16 753	7 584	1 134	550	484	100
Other	2 556	1 295	6 006	2 873	1 411	695	664	52
Zinc Alloys	5 580	11 497	10 954	8 576	2 147	770	728	649
Scrap	17 430	20 333	17 938	22 815	6 352	2 032	2 260	2 060
Exports								
Ores and Concentrates	4 820	-	2 687	9 045	6 718	1 556	2 962	2 200
Slab Zinc	18 427	29 239	47 560	37 145	5 345	2 353	1 854	1 136
of which to:								
Germany, F.R.	10 024	14 221	5 406	4 320	928	493	255	180
Italy	-	549	552	1 362	181	-	135	46
Switzerland	268	1 163	1 163	3 937	847	312	319	216
U.S.A.	-	2 435	23 332	12 919	1 314	918	156	240
Other	6 135	10 871	17 107	14 607	2 075	630	989	456
Zinc Alloys	1 293	1 295	699	2 888	807	159	70	476
Scrap	1 610	1 496	1 698	2 295	553	113	223	216
Consumption								
Slab Zinc	220 200	225 400	264 100	290 400				
MANUFACTURES								
Production								
Zinc Dust	6 800	7 071	9 582	7 131	2 152	801	673	678
Zinc Diecastings	32 480	34 550	41 400	31 110	7 910 ⁽³⁾	4 060	3 850	-
Sheet	65 280	68 761	77 384	83 381	14 100 ⁽³⁾	7 048	7 052	-
Zinc Oxide	39 300	39 885	39 913	52 512	16 091	5 427	5 191	5 473
Lithopone	32 000	30 010	14 737	12 616	3 430	1 215	1 090	1 125
Imports								
Zinc Dust	4 457	4 420	4 481	4 615	1 116	571	198	347
Plate, Sheet and Strip	5 759	4 308	3 540	3 840	1 125	442	253	430
Other Manufactures	5 498	6 011	7 264	1 085	251	70	51	130
Zinc Oxide	3 657	3 607	5 515	4 248	698	301	280	117
Lithopone	10 916	9 721	16 315	17 545	4 069	1 287	1 373	1 409
Exports								
Dust	1 967	1 685	2 850	3 422	1 409	300	798	311
Plate, Sheet and Strip	5 530	6 418	16 353	23 089	5 412	1 755	1 765	1 832
Other Manufactures	570	484	1 702	1 338	536	144	131	261
Zinc Oxide	24 ⁽²⁾	44 ⁽²⁾	80 ⁽²⁾	20 358	-	-	-	-
Lithopone	5 626	2 202	1 657	3 184	388	141	165	82

Notes (1) January to July

ZINC Germany F.R.

METRIC TONS

	1970	1971	1972	1973	1973		1974	
					Nov	Dec	Jan	Feb
UNWROUGHT								
Production								
Ores and Concentrates (Zn content)	137 709	147 700	138 800	142 600	12 000	10 800	12 800	10 700
Slab Zinc	301 181	262 619	353 671	395 019	32 267	32 548	34 492	32 213
of which: High Grade	163 236	148 034	247 200	257 003	20 199	21 612	22 992	21 206
Remelted Zinc	19 812	22 655	23 785	24 594	2 646	1 897	2 368	2 196
Imports								
Ores and Concentrates (gross weight) Total ..	363 758	355 231	501 415	622 593	61 798	25 842	39 093	37 246
of which from:								
Belgium	-	2 059	14 113	22 286	2 103	1 773	-	-
Irish Republic	29 689	19 303	44 398	58 896	2 524	2 499	-	2 500
Sweden	65 663	59 543	69 171	79 301	11 681	5 607	6 585	4 099
Bolivia	2 961	6 228	14 930	12 827	5 247	-	-	-
Canada	191 529	195 682	240 467	294 989	31 951	-	18 527	25 872
Peru	14 727	19 218	61 571	42 207	-	4 921	-	-
Mexico	-	-	20 557	38 780	-	5 062	5 020	2 026
Australia	13 964	15 266	13 054	9 805	-	1 607	-	-
Other	45 245	37 932	23 154	63 502	8 292	4 373	8 960	2 749
Slab Zinc — Total	148 118	164 320	133 538	106 558	6 438	7 634	10 144	6 108
of which from:								
Belgium	70 749	70 785	77 945	64 614	5 279	5 322	5 558	4 026
France	10 227	14 107	4 608	3 716	135	450	767	718
Netherlands	15 606	15 741	18 506	15 408	430	1 339	355	662
Norway	9 016	13 372	8 239	8 609	501	300	1 500	-
Poland	5 321	6 553	5 267	2 200	-	-	-	-
Zaire	8 501	11 506	5 000	500	-	-	-	-
Canada	9 985	8 240	5 511	2 126	-	-	100	-
Other	18 713	24 016	8 462	9 385	93	223	1 864	702
Scrap	2 487	3 233	2 327	3 767	228	205	605	339
Exports								
Ores and Concentrates (gross weight) Total ..	49 852	55 187	43 974	82 187	6 969	4 906	9 380	5 220
of which to:								
Belgium	30 201	34 164	25 294	35 277	2 900	2 512	4 762	2 392
France	12 228	4 304	568	8 204	-	5	280	840
Netherlands	6 623	11 933	13 006	25 843	4 068	2 389	4 338	1 979
Other	800	4 786	5 106	12 863	1	-	-	9
Slab Zinc — Total	47 535	38 572	91 158	91 578	5 210	6 337	6 924	6 244
of which to:								
France	105	1 339	3 134	3 162	303	-	51	623
Italy	20 545	9 001	10 507	12 653	869	481	1 222	1 080
Netherlands	3 067	4 722	12 807	19 318	2 459	1 562	1 829	2 338
Switzerland	5 650	5 314	8 404	3 746	391	239	292	151
U.K.	-	-	4 672	31 570	5	3 290	2 359	300
U.S.A.	10 108	11 758	41 391	6 823	710	-	820	525
Brazil	-	100	2 041	3 929	150	2	-	-
Other	8 060	6 338	8 202	10 377	323	763	351	1 227
Scrap	5 904	5 846	6 787	9 827	1 431	634	567	657
Consumption								
Slab Zinc	395 700	387 500	413 100	438 165				
of which: High Grade	235 500	237 000	256 800					
Stocks								
at: Producers	38 440	47 376	31 459	11 620				
Consumers	25 807	21 689	28 415	21 544				
Merchants	11 300	7 229	4 110	2 518				
Total	75 547	76 294	63 984	35 682				
MANUFACTURES								
Production								
Diecasting Alloys	93 000	89 500	94 600					
Lithopone	52 600	43 600	44 200					
Zinc Oxide	41 566	32 650						
Semi-manufactures	72 700	72 907	64 121	64 772	5 677	4 269	6 122	4 852
Castings	64 981	59 865	57 670	63 790	5 495	4 000	4 911	4 518
Imports Semi-manufactures:								
Rods, Bars, Sections and Wire	188	798	214	435	45	86	178	114
Plate, Sheet and Strip	15 294	12 966	27 556	21 973	1 600	1 452	1 410	1 034
Tubes	45	88	93	90	2	3	25	19
Total	15 527	13 652	27 863	22 498	1 647	1 541	1 613	1 167
Other Zinc Manufactures	1 461	1 343	2 075	2 451	222	207	234	221
Zinc Oxide and Peroxide	3 994	4 891	7 093	5 718	324	445	617	436
Lithopone	2 466	2 653	2 326	1 905	145	80	242	42
Zinc Chloride	668	820						
Exports Semi-manufactures:								
Rods, Bars, Sections and Wire	1 328	1 455	1 529	1 677	157	175	144	161
Plate, Sheet and Strip	6 645	11 114	9 171	12 682	2 055	1 831	1 399	1 258
Tubes	2	6	29	73	5	43	-	1
Total	7 975	12 575	10 729	14 432	2 217	2 050	1 543	1 420
Other Zinc Manufactures	7 068	6 986	6 991	8 974	747	766	714	948
Zinc Oxide and Peroxide	10 005	9 190	11 179	11 841	981	998	1 256	1 176
Lithopone	36 034	29 533	30 968	31 925	2 643	1 721	3 372	2 560
Zinc Chloride	5 769	5 730						

ZINC Italy

METRIC TONS

	1969	1970	1971	1972	1973			
					Jan-Dec	Oct	Nov	Dec
UNWROUGHT								
Production								
Ores and Concentrates (Zinc content)	132 600	110 700	106 000	102 600	80 600	7 500	7 000	6 700
Slab Zinc (Electrolytic)	130 320	142 083	138 919	155 861	173 100	14 500	14 200	13 500
Zinc Alloys	34 300	38 300	41 500	43 500				
Imports								
Ores and Concentrates	60 241	103 563	107 324	145 837	179 093 ²⁾	8 288	17 476	
of which from:								
Algeria	21 501	13 533	10 100	16 274	10 920	1 500	-	-
Canada	7 773	9 754	10 430	-	48 921	-	5 892	-
Greece	6 084	10 526	12 170	1 170	18 892	-	4 300	-
Peru	6 051	22 711	14 953	27 507	21 094	4 623	-	-
Tunisia	11 200	13 277	7 260	16 499	12 270	1 550	-	-
Yugoslavia	-	1 577	5 792	8 737	3 718	212	233	-
Other	7 632	32 185	46 619	75 650	63 278	403	7 051	-
Slab Zinc	38 980	44 021	32 622	37 969	48 452	3 680	2 174	5 007
of which from:								
Austria	1 835	201	100	-	-	-	-	-
Australia	2 837	1 551	305	1 370	1 500	-	-	-
Belgium	557	1 959	1 859	8 079	6 389	899	18	1 125
Bulgaria	2 497	3 732	5 078	2 621	4 375	300	105	545
Canada	3 806	6 273	2 759	3 148	4 797	600	-	602
France	3	38	403	41	1 414	98	153	21
Germany, F.R.	4 568	13 330	9 418	8 876	14 081	1 289	760	1 037
Peru	1 199	951	249	-	-	-	-	-
Spain	-	-	2 925	-	-	-	-	-
United Kingdom	2 839	101	-	-	480	98	19	143
Yugoslavia	10 921	8 658	6 078	1 675	1 799	52	-	428
Zaire	3 497	4 997	1 876	3 848	5 485	200	600	389
Zambia	1 667	975	152	3 453	4 921	119	-	199
Other	2 724	1 855	1 380	4 843	3 211	25	519	518
Alloys	6 743	12 269	7 304	9 858	13 025	559	1 307	491
Exports								
Ores and Concentrates	39 687	11 861	7 132	82	82	15	600	
of which to:								
Austria	11 282	5 000	395	-	-	-	-	-
Spain	-	-	-	-	3	-	600	-
Yugoslavia	28 278	6 060	4 495	55	-	-	-	-
Other	127	601	2 242	27	5	15	-	-
Slab Zinc	809	1 886	116	120	4 989	50	98	4 413
of which to								
France	83	122	5	-	84	-	-	84
Germany, F.R.	15	13	16	16	136	-	-	110
Greece	649	1 198	50	-	74	-	49	1
Switzerland	-	1	-	10	21	-	20	1
Turkey	49	539	-	6	185	-	-	-
Other	13	13	45	88	4 489 ³⁾	50	29	4 217 ³⁾
Alloys	36	61	60	142	142	1	19	39
Consumption								
Slab Zinc	167 000	178 000	170 000	203 000	110 000 ¹⁾			
MANUFACTURES								
Production								
Semi-manufactures:								
Rolled Zinc	9 400	12 200	10 900	10 500				
Wire and Other Manufactures	500	600	700	300				
Castings	36 000	42 000	44 000	48 000				
Imports								
Semi-manufactures:								
Rods and Wire	66	6	397	564	562		40	
Rolled Zinc	57	194	89	207	1 659	376	127	204
Tubes	15	42	20	-	134	8	10	17
Total	178	242	506	771	2 355		177	
Other Manufactures	2 984	3 622	3 326	4 650	5 247	555	496	464
Zinc Dust and Powder	3 417	3 577	3 583	2 225	1 655	299	87	410
Zinc Oxide	4 955	6 752	6 371	4 323	3 634 ⁽²⁾	404		
Zinc Sulphate	424	353	13	142	277 ⁽²⁾	19		
Zinc Sulphide and Lithopone	1 204	2 291	4 028	4 080	1 503 ⁽²⁾	100		
Exports								
Semi-manufactures:								
Rods and Wire	7	4	6	31	13			1
Rolled Zinc	135	67	206	187	192	3	21	13
Tubes	30	37	15	47	145			2
Total	172	108	227	265	350			16
Other Manufactures	111	217	228	501	879	97	50	293
Zinc Dust and Powder	1 121	1 863	488	164	169	20	20	41
Zinc Oxide	1 168	574	921	1 968	938 ⁽²⁾	216		
Zinc Sulphate	815	910	364	697	1 315 ⁽²⁾	151		
Zinc Sulphide and Lithopone	2 944	388	13	20	3 ⁽²⁾			

Notes (1) January to June (2) January to September
(3) Includes Belgium 2847 tons and U.S.A 1347 tons.

ZINC Japan

METRIC TONS

	1970	1971	1972	1973	1973		1974	
					Nov	Dec	Jan	Feb
UNWROUGHT								
Production								
Ores and Concentrates (Zinc content)	279 700	294 400	281 000	263 900	21 100	21 100	19 800	18 687
Slab Zinc	676 250	716 368	804 777	842 761	69 567	67 170	68 200	61 100
Remelted Zinc	22 100	22 010	23 305					
Imports								
Ores and Concentrates (gross weight)	972 913	1 075 659	1 115 675	1 205 405	126 525	182 423	126 729	77 382
of which from:								
Australia	168 424	117 709	120 691	209 665	28 498	27 855	31 616	14 182
Bolivia	40 219	34 508	41 692	16 621	11 621	-	3 006	3 300
Canada	244 505	369 678	343 703	415 839	27 569	88 814	33 457	18 896
Chile	-	9 912	260	8 610	-	4 000	-	5 009
Iran	47 121	37 984	46 408	43 250	4 700	6 000	-	-
Mexico	32 395	101 111	91 278	62 653	11 040	5 417	-	6 395
New Zealand	4 323	4 491	3 326	2 457	-	-	-	-
N. Korea	62 480	2 919	-	-	-	-	-	-
Peru	297 578	338 689	399 876	324 310	31 797	33 077	40 217	15 925
Philippines	7 726	7 319	7 782	11 470	-	3 020	-	3 000
S. Korea	39 275	36 438	48 763	61 710	6 300	2 650	7 510	5 500
Other	28 867	14 841	11 896	48 820	5 000	11 590	10 923	5 175
Slab Zinc Total ..	21 941	13 919	7 825	27 794	5 399	9 008	4 279	4 884
of which from:								
N. Korea	6 676	8 700	7 358	16 172	2 802	3 596	1 880	1 625
Canada	7 881	2 410	-	17	-	-	-	-
Australia	4 768	1 805	-	365	168	25	73	15
Other	2 616	1 004	467	11 240	2 429	5 387	2 326	3 244
Exports								
Slab Zinc Total ..	52 585	62 986	106 637	64 005	3 147	3 514	4 632	3 485
of which to:								
China	-	673	29	-	-	-	-	-
Ethiopia	566	353	287	40	-	-	-	-
India	178	20 566	15 647	4 578	-	-	-	-
Indonesia	1 830	1 884	5 463	5 172	78	417	-	218
Malaya	120	847	1 447	180	19	3	-	-
Philippines	4 268	5 161	8 544	3 719	178	22	-	252
Singapore	1 078	5 073	3 150	529	29	1	-	-
S. Korea	6 462	3 975	8 733	9 742	901	759	1 184	1 020
S. Vietnam	1 541	3 961	1 417	990	-	-	-	-
Taiwan	5 332	8 573	12 696	4 633	179	179	236	458
Thailand	1 027	3 397	4 672	3 044	79	404	87	330
United Kingdom	2	-	-	-	-	-	-	-
U.S.A.	27 225	4 979	40 834	28 934	1 670	1 607	3 050	900
Other	2 906	3 544	3 718	2 444	14	122	75	307
Zinc Alloys	1 442	1 170	810	1 083	124	118	25	108
Consumption								
Slab Zinc	618 700	620 700	713 000	822 000	72 000	75 000	65 000	60 000
Stocks								
Producers	54 243	77 198	71 641	50 649 ⁽¹⁾				53 196
MANUFACTURES								
Production								
Zinc Dust	34 720	34 454	33 198					
Plates, Sheet and Strip	37 775	35 567	39 877	40 025	3 387	3 032		
Zinc Oxide	61 589	59 667	62 460	64 488	5 138	4 981		
Zinc Sulphate	29 145	28 360	27 338	31 975	2 662	2 901		
Imports								
Plates, Sheet and Strip	1	2	-	17	-	-	-	-
Zinc Oxide	383	264	1 084	994	208	258	494	620
Exports								
Rods, Bars, Sections and Wire	20 903	1 276	924	153	4	-	-	-
Plate, Sheet, Strip and Foli	3 455	3 374	1 596	1 690	143	130	54	46
Tubes	-	62	25	14	-	-	-	3
Total	24 358	4 712	2 545	1 857	147	130	54	49
Powders and Flakes	315	349	126	216	10	12	1	1
Zinc Chloride	897	1 331	1 183	919	124	104	32	26
Zinc Oxide and Peroxide	726	1 384	1 547	889	75	73	17	51

Notes (1) As at end of July

ZINC

United Kingdom

1 Summary

METRIC TONS

	1970	1971	1972	1973	1974			
					Jan-Mar	Feb	Mar	Apr
UNWROUGHT								
Production								
Slab Zinc - Total	146 597	116 464	73 826	83 810	20 463	7 301	6 889	3 690
of which - High Purity	31 659	35 184	24 738	26 887	7 156	2 639	2 012	2 170
Imports								
Ores and Concentrates (zinc content)	154 315	135 982	59 274	62 297	24 119	-	3 756	10 059
Slab Zinc	160 838	171 664	224 681	219 715	11 972(1)			
Zinc Alloys	2 662	1 972	6 116	6 898	702(1)			
Exports (incl. Re-exports)								
Slab Zinc	11 948	7 757	13 271	20 101	465(1)			
Zinc Alloys	3 953	3 342	2 470	6 502	549(1)			
Consumption								
Slab Zinc	277 792	273 667	279 294	305 436	67 328	21 965	23 829	21 939
Remelted Zinc	5 451	7 713	8 517	7 064	1 668	430	646	585
Scrap (Zinc content)								
Zinc Metal, Alloys and Residues	39 416	34 898	33 607	35 373	8 587	2 864	3 250	2 832
Brass and other Copper Alloys	47 643	38 498	40 414	43 668	12 227	4 248	3 972	3 855
Total	370 302	354 776	361 832	391 541	89 810	29 507	31 697	29 211
Stocks								
Slab Zinc:								
At Consumers	20 663	17 246	24 141	19 930	17 970	21 205	17 970	16 735
In L.M.E. Warehouses (UK)	225	50	2 275	1 175	1 675	100	1 675	1 225
Total	20 888	17 296	26 416	21 105	19 645	21 305	19 645	17 960
Analysis of Stocks at Consumers								
By Grades:								
High Purity Zinc (99.99%)	6 597	3 712	6 892	7 536	5 632	6 312	5 632	4 594
Electro and High Grade (99.95%)	4 354	5 695	4 856	5 050	5 866	8 194	5 866	5 768
G.O.G., Prime W. and Debased	9 712	7 839	12 393	7 344	6 472	6 699	6 472	6 373
By Trades:								
At Galvanizers	7 221	6 731	8 907	8 413	6 683	7 859	6 683	6 996
.. Brass Makers	3 513	3 137	3 418	3 687	3 755	4 889	3 756	3 738
.. all other Consumers	9 929	7 378	11 816	7 830	7 531	8 457	7 531	6 001
MANUFACTURES								
Production								
Plates, Sheets and Strip (incl. Wire)	25 619	26 174	25 198	28 857	6 481	2 281	2 315	1 527
Zinc Dust and Powder	15 636	15 580	16 402	14 755	3 045	919	1 216	1 097
Zinc Oxide - Indirect								
Direct	34 705	33 367	33 050	35 476	8 210	2 425	3 251	2 764
Total	10 850	11 175	12 941	17 788	3 945	1 259	1 691	1 395
Total	45 555	44 542	45 991	53 266	12 255	3 684	4 942	4 159
Grey Zinc Oxide	9 878	11 866	7 323	6 989	1 194	317	418	304
Die Casting and Forming Alloy (Zinc Content)								
Production	70 417	67 415	70 317	74 041	17 445	6 390	5 725	4 949
Deliveries	71 880	66 803	71 262	76 379	18 842	6 496	5 989	5 217
Imports								
Wrought Products (incl. Alloys):								
Rods, Bars, Sections and Wire	22	25	35	494	55(1)			
Sheet, Strip, Plate, Foil and Flakes	400	514	485	1 892	143(1)			
Tubes and Pipe	2	7	3	157	151(1)			
Total	424	546	523	2 543	349(1)			
Zinc Powders (excluding Blue Powder)	77	40	207	140	8(1)			
Zinc Oxide	354	975	1 866	927	305(1)			
Lithopone Dry	4 768	4 394	3 237	3 058				
Exports								
Wrought Products (incl. Alloys):								
Rods, Bars, Sections and Wire	1 785	2 485	3 316	3 007	209(1)			
Sheet, Strip, Plate, Foil and Flakes	2 241	1 767	1 688	5 518	610(1)			
Tubes and Pipe	151	101	145	210	21(1)			
Total	4 187	4 353	5 349	8 735	840(1)			
Zinc Powders (excluding Blue Powder)	2 348	2 001	2 106	2 710	171(1)			
Zinc Oxide	5 406	5 626	7 041	9 002	1 083(1)			
Lithopone Dry	30	96	34	20				

Notes (1) January only

United Kingdom

2 Imports of Unwrought Zinc

METRIC TONS

	1970	1971	1972	1973	1973			1974
					Oct	Nov	Dec	Jan
CONCENTRATES (Zinc Content)								
Australia	103 267	86 972	21 302	20 493	4 709	-	-	6 84
Irish Republic	12 544	12 152	15 299	5 700	-	1 222	985	1 285
Canada — Newfoundland Prov.	26 160	23 741	8 153	-	-	-	-	4 231
Iran	-	-	-	2 600	-	-	-	2 250
Morocco	3 335	-	-	5 007	980	352	540	51
Turkey	901	395	1 475	910	-	-	-	-
U.S.A.	-	2 381	3 676	1 084	-	-	-	690
Peru	6 415	9 825	9 286	24 858	4 855	3 875	638	4 536
Other Countries	1 693	516	83	1 645	-	-	-	-
Total Imports	154 315	135 982	59 274	62 297	10 634	5 449	2 163	20 36
SLAB ZINC								
Australia - High Purity	14 181	15 063	11 380	11 801	48	1 047	949	960
- Electro	4 269	4 564	1 475	2 060	-	259	199	249
- G.O.B.	63	12 200	28 212	20 845	3 393	9	-	-
Total	18 513	31 827	41 067	34 706	3 441	1 315	1 148	1 209
Belgium - High Purity	2 990	1 605	12 521	9 255	1 165	1 159	390	1 820
- Electro	569	-	-	612	265	-	-	190
- G.O.B.	-	-	1 660	40	-	-	-	-
Total	3 559	1 605	14 181	9 907	1 430	1 159	390	2 016
Bulgaria - High Purity	-	551	199	-	-	-	-	-
- Electro	12 142	18 549	11 210	7 373	-	599	-	-
Total	12 142	19 100	11 409	7 373	-	599	-	-
Canada - High Purity	35 794	21 969	23 040	18 854	2 050	2 035	2 309	637
- Electro	29 637	21 355	15 786	16 319	1 651	1 065	1 787	1 368
- G.O.B.	33 934	28 986	26 678	24 675	1 753	2 263	2 897	1 638
Total	99 255	72 310	65 504	59 848	5 454	5 363	6 993	3 643
Finland - High Purity	3 324	2 504	15 312	16 836	1 120	1 055	1 873	50
- Electro	408	-	3 461	6 814	680	824	-	-
- G.O.B.	-	-	12 740	11 708	1 150	1 150	1 168	-
Total	3 732	2 504	31 513	35 358	2 950	3 029	3 041	50
Germany Dem- High Purity	10	25	299	-	-	-	-	-
Republic - Electro	540	-	-	-	-	-	-	-
Total	550	25	299	-	-	-	-	-
Germany F.R. - High Purity	20	-	4 711	13 406	200	-	580	1 709
- Electro	-	-	-	10 745	-	-	970	-
- G.O.B.	-	-	50	3 150	800	-	600	648
Total	20	-	4 761	27 301	1 000	-	2 150	2 357
N. Korea - Electro	-	20	500	871	-	-	-	-
- G.O.B.	-	-	2	-	-	-	-	-
Total	-	20	502	871	-	-	-	-
Netherlands - High Purity	700	151	-	40	-	20	-	181
- Electro	3 219	4 378	8 446	6 515	-	40	921	-
- G.O.B.	241	2 391	1 203	-	-	-	-	-
Total	4 160	6 920	9 649	6 555	-	60	921	181
Norway - High Purity	4 154	4 972	9 673	12 959	910	150	2 102	370
- Electro	251	3 628	1 681	242	-	-	-	-
- G.O.B.	250	51	-	40	-	-	-	-
Total	4 655	8 651	11 354	13 241	910	150	2 102	370
Peru - High Purity	4 291	1 762	846	250	-	-	-	-
- Electro	902	-	-	-	-	-	-	-
Total	5 193	1 762	846	250	-	-	-	-
Poland - High Purity	300	2 315	2 100	2 451	120	201	100	-
- Electro	2 530	4 924	4 998	1 422	50	100	320	590
- G.O.B.	-	1 420	2 400	1 652	-	-	-	-
Total	2 830	8 659	9 498	5 525	170	301	420	590
Spain - High Purity	44	1 221	303	-	-	-	-	-
- Electro	899	500	70	-	-	-	-	-
Total	943	1 721	373	-	-	-	-	-
Switzerland - High Purity	-	601	195	-	-	-	-	-
- Electro	-	1 307	-	-	-	-	-	-
Total	-	1 908	195	-	-	-	-	-
U.S.A. - High Purity	1 387	1 149	2 035	-	-	-	-	696
- G.O.B.	277	252	-	-	-	-	-	-
Total	1 664	1 401	2 035	-	-	-	-	696
U.S.S.R. - Electro	703 ⁽¹⁾	11 691	4 546	14 749	-	-	1 249	550
Yugoslavia - High Purity	565	-	-	-	-	-	-	-
- Electro	999	-	-	-	-	-	-	-
Total	1 564	-	-	-	-	-	-	-
Zambia - Electro	300	1 137	5 566	2 300	200	400	-	300
- G.O.B.	-	-	5 006	-	-	-	-	-
Total	300	1 137	10 572	2 300	200	400	-	300
Other Countries - High Purity	-	-	861	500	-	-	-	-
- Electro	-	-	2 161	1 231	-	-	-	10
- G.O.B.	945	223	3 557	-	-	-	-	-
Total	945	223	6 579	1 731	-	-	-	10
Total Imports	160 838	171 654	224 681	219 715	15 555	12 376	18 414	11 972
- High Purity	68 463	53 888	83 275	86 352	5 613	5 667	8 303	6 429
- Electro	56 665	72 253	59 900	71 253	2 846	3 287	5 446	3 257
- G.O.B.	35 710	45 523	81 506	62 110	7 096	3 422	4 665	2 286

Note (1) High purity

ZINC

United Kingdom

3 Consumption by Grades

METRIC TONS

	1970	1971	1972	1973	1974			
					Jan-Mar	Feb	Mar	Apr
Slab Zinc:								
High Purity (99.99%)	55 604	79 068	85 518	96 135	24 513	8 405	7 932	6 889
Electrolytic and High Grade (99.95%)	63 311	71 118	64 469	75 379	18 068	5 653	7 225	6 431
G.O.B. Prime Western and Debased	128 877	123 481	129 287	133 922	24 747	7 907	8 672	8 619
Total	277 792	273 667	279 294	305 436	67 328	21 965	23 829	21 939
Remelted Zinc	5 451	7 713	8 517	7 064	1 668	430	646	585
Scrap - (Zinc content)								
Zinc Metal, Alloys and Residues	39 416	34 898	33 607	35 373	8 587	2 864	3 250	2 832
Brass and Other Copper Alloys	47 643	38 498	40 414	43 668	12 227	4 248	3 972	3 855
Total Consumption	370 302	354 776	361 832	391 541	89 810	29 507	31 697	29 211

4 Uses of Zinc

Monthly Totals

END USE	1974							
	January-March		February		March		April	
	Slab	Total	Slab	Total	Slab	Total	Slab	Total
Galvanizing: General	8 091	8 305	2 619	2 661	2 939	3 055	2 827	2 935
Sheet and Strip	7 540	7 540	2 257	2 257	2 580	2 580	2 986	2 936
Wire	4 627	4 627	1 545	1 545	1 485	1 485	1 504	1 504
Tube	1 892	1 892	654	654	681	681	466	466
Total	22 150	22 364	7 075	7 117	7 685	7 801	7 783	7 891
Brass	13 023	25 485	4 178	8 479	5 068	9 157	5 002	8 971
Rolled Zinc	6 481	6 481	2 281	2 231	2 315	2 315	1 527	1 527
Zinc Oxide	5 633	9 687	1 467	2 897	2 368	3 928	2 045	3 308
Zinc Die Casting and Forming Alloy	18 526	19 081	6 452	6 645	5 802	5 976	4 875	5 021
Zinc Dust	487	3 045	131	919	199	1 216	203	1 097
Miscellaneous Uses	1 028	3 667	331	1 169	392	1 304	504	1 396
Total Consumption	67 328	89 810	21 965	29 507	23 829	31 697	21 939	29 211

Annual Totals

END USE	1970		1971		1972		1973	
	Slab Zinc	Total	Slab Zinc	Total	Slab Zinc	Total	Slab Zinc	Total
Galvanizing: General	34 996	36 731	37 127	39 039	34 277	36 188	35 752	36 486
Sheet and Strip	30 491	30 491	31 136	31 136	36 755	36 755	36 186	36 186
Wire	18 401	18 622	16 068	18 279	17 217	17 546	19 508	19 552
Tube	10 551	10 563	10 158	10 158	9 523	9 523	9 843	9 843
Total	94 439	96 407	96 489	98 612	97 772	99 992	101 289	102 067
Brass	59 027	107 273	56 408	96 123	55 092	96 537	62 488	109 254
Rolled Zinc	25 183	25 754	26 136	26 382	25 198	25 198	28 857	28 857
Zinc Oxide	20 126	36 243	20 985	35 257	21 471	36 190	28 149	42 334
Zinc Die Casting and Forming Alloy	72 483	74 657	67 390	69 382	70 937	73 064	77 249	79 564
Zinc Dust	2 952	15 036	3 304	15 580	4 294	16 402	2 694	14 755
Miscellaneous Uses	3 582	14 332	2 865	13 440	4 530	14 459	4 710	14 755
Total Consumption	277 792	370 302	273 667	354 776	279 294	361 832	305 436	391 541

ZINC

U.S.A.

METRIC TONS

	1970	1971	1972	1973	1974			
					Jan-Mar	Jan	Feb	Mar
UNWROUGHT								
Production								
Ores and Concentrates:								
Content by Analysis	532 500	501 000	476 800	473 800 ^r	82 400 ⁽⁴⁾	42 500	39 900	
Recoverable Content	484 561	455 900 ^r	433 923	431 653	112 283	38 681	35 622	
Slab Zinc Total ..	866 333	768 709	567 382 ^r	521 931 ^r	124 043	41 197	39 899	42 947
of which:								
Special High Grade	354 029	333 490 ^r						
High Grade	98 906	66 509 ^r						
Reprocessed G.S.A. Metal ⁽¹⁾	-	-	73 906 ⁽²⁾	102 086 ^r	13 258	4 550	4 403	4 305
Total Smelter Output	866 333	768 709	641 288 ^r	624 017 ^r	137 301	45 747	44 302	47 252
Imports								
Ores and Concentrates (Zinc content)	476 961	310 730 ^r	231 214	180 575	54 023	13 957	22 087	17 980
of which from:								
Canada	288 478	189 678	122 955	112 724	36 993	10 142	11 718	15 133
Mexico	116 981	81 506	51 996	30 732	9 329	2 790	4 613	1 925
Peru	43 579	13 630	13 840	11 953	2 851	219	2 378	253
Honduras	17 479	19 515	15 759	5 294	478	-	320	158
Other	10 444	6 401	26 664	19 872	4 372	806	3 058	511
Slab Zinc Total ..	245 315	289 908	474 106 ^r	534 081	143 049	51 008	44 776	47 263
of which from:								
Australia	27 520	34 974	35 945	38 172	9 751	2 140	1 843	5 767
Belgium	13 037	8 496	35 939	36 203	15 536	4 399	8 269	2 867
Canada	109 417	136 865	245 965	312 704	76 949	27 212	21 360	28 376
Finland	1 191	28 759	7 786 ^r	12 867	3 758	2 554	598	605
Germany, F.R.	2 901	3 320	28 448	7 443	2 058	487	820	751
Japan	29 506	7 897	27 281	38 708	5 942	1 825	1 448	2 668
Mexico	6 676	9 189	7 615	1 736	3 841	408	2 606	826
Netherlands	7 008	12 050	12 702	2 929	787	368	219	200
Peru	28 960	21 657	27 782	17 549	1 191	527	-	663
Poland	7 011	2 373	3 809	11 946	3 744	2 340	953	450
Zaire	5 715	8 072	20 405	25 798	6 978	1 979	3 503	1 489
Other	6 373	16 256	20 429 ^r	26 026	12 514	6 769	3 152	2 601
Zinc Alloys	1 964	297	113	1 201 ⁽³⁾				
Exports								
Slab Zinc	262	12 108	3 923	13 285 ^r	7 727	2 770	3 222	1 735
Zinc Alloys	2 200	1 369	1 980	9 854				
Zinc Scrap	2 012 ^r	1 113	1 019	5 832				
Consumption								
Slab Zinc Total ..	1 074 250	1 136 945 ^r	1 285 698 ^r	1 350 310 ^r	205 983 ⁽⁴⁾	106 920	99 063	
Ores (Zinc Content)	113 200	108 186	107 325	143 970 ^r	22 134 ⁽⁴⁾	10 976	11 158	
Stocks								
Slab Zinc:								
at Producers	89 189	37 934 ^r	19 215	26 574	22 741 ⁽⁴⁾	27 062	22 741	
at Consumers (including remelted)	81 239	83 028 ^r	114 433	95 167	99 726 ⁽⁴⁾	101 172	99 726	
MANUFACTURES								
Production								
Rolled Zinc	35 593	34 712 ^r	41 019					
Zinc Dust	46 390	45 594	53 849 ^r	40 051	5 610 ⁽⁴⁾	2 892	2 718	
Zinc Oxide	203 000	195 001 ^r	215 017 ^r	227 361	37 212 ⁽⁴⁾	18 615	18 597	
Imports								
Zinc Dust	8 499	7 425	8 342	4 237				
Zinc Oxide	10 952	11 897	17 551	24 961 ^r	4 004 ⁽⁴⁾	2 258	1 746	
Zinc Bars, Angles, Shapes, Sections and Wire	98	232	326	813 ⁽³⁾				
Zinc Plate, Sheet, Strip, Foil, Powders and Flakes	9 148	7 893	8 850	4 629 ⁽³⁾				
Zinc Pipes, Tubes, Blanks and Fittings	16	62	67	42 ⁽³⁾				
Exports								
Zinc and Zinc Alloy Plate, Sheet and Strip	1 281	1 529	2 195	2 261				
Other manufactures of Zinc and Zinc Alloy	20 971	4 112	3 509	4 101				
Zinc Oxide	5 739	6 064	5 597	7 580				
Blue Powder	5 812	702	291	604				

Notes: (1) Slab zinc produced by the retreatment of G.S.A. metal released from the U.S.A. Stockpile
(2) Beginning in May 1972
(3) January to November
(4) January to February

Slab Zinc Capacity
(Thousands of Metric Tonnes)

	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>
United States	699	691	691	679	737	855	959	1004
Canada	532	592	612	653	689	689	689	689
Mexico	100	110	170	235	235	235	235	235
Latin America	126	130	141	151	161	226	281	336
Africa	176	186	191	206	226	246	253	253
Europe	1817	1849	1902	2032	2193	2223	2258	2293
Japan	891	904	931	1018	1036	1036	1036	1096
Other Asia	49	49	49	81	123	162	201	210
Australia	<u>305</u>	<u>305</u>	<u>305</u>	<u>305</u>	<u>305</u>	<u>305</u>	<u>305</u>	<u>305</u>
Total	4695	4816	4992	5360	5705	5977	6217	6421

World Mine Production

THOUSAND METRIC TONS

	1969	1970	1971	1972	1973	1973		1974		
						Nov	Dec	Jan	Feb	Mar
EUROPE										
Austria	6.0	5.4	6.4	5.7	5.2	0.4	0.4	0.5	0.6	
Finland	4.6	5.0	4.7	3.8	2.5	0.2	0.2	0.2	0.2	0.2
France	30.3	28.8	29.8	26.6	25.0	2.1	1.9	2.0	1.9	
Germany, Federal Republic	51.5	50.0	49.8	46.2	41.9	3.4	2.8	3.7	3.2	
Greece	8.5	9.2	12.2	16.3	16.8	1.4	1.4	1.5	1.5	1.5
Greenland	-	-	-	-	8.4	1.5	1.6	1.7	1.6	1.2
Irish Republic	59.9	64.2	51.6	59.6	60.2	5.0	5.0	5.0	5.0	5.0
Italy	37.0	35.2	31.6	33.7	27.2	2.6	2.4	2.4	1.6	
Norway	3.5	3.3	3.2	3.2	3.2	0.4	0.3	0.3	0.4	0.3
Portugal	1.8	1.6	1.4	1.2	1.6	0.1	0.1	0.1	0.1	0.1
Spain	71.7	72.7	69.5	69.0	62.1	5.5	4.2	4.8	5.0	
Sweden	76.4	76.5	77.7	73.0	74.1	7.1	5.2	6.8	6.2	
United Kingdom	1.5	1.5	1.5	0.4	0.2	-	-	-	-	
Yugoslavia	118.0	126.7	125.2	130.0	132.0	11.0	11.0	11.2	11.2	11.2
Total	470.7	480.1	464.6	468.7	460.4	40.7	33.7	40.2	38.5	
AFRICA										
Algeria	7.9	6.5	4.7	5.0	4.8	0.4	0.4	0.7	0.7	
Morocco	77.6	81.0	78.5	86.1	86.4	7.2	7.2	7.2	7.2	0.7
South West Africa	75.7	70.5	73.2	59.0	63.2	6.1	4.3	5.4		7.2
Tunisia	24.0	22.0	18.8	32.6	33.3	2.8	2.8	2.8	2.9	
Zambia	22.9	32.6	33.9	31.4	25.3	2.0	1.6	2.0	2.1	2.9
Other	4.8	-	-	-	-	-	-	-	-	2.3
Total	212.9	212.6	200.1	214.1	213.0	18.5	18.1	18.1		
ASIA										
Burma	9.8	9.6	9.5	9.5	11.0	1.0	1.0	1.0	1.0	
India	3.0	2.8	3.3	2.7	2.4	0.2	0.2	0.4	0.4	1.0
Iran	18.8	20.9	24.0	32.0	30.0	2.5	2.5	2.5	2.5	0.4
Japan	63.5	64.4	70.6	63.6	52.9	4.1	4.1	4.0	3.4	2.5
South Korea	16.5	16.0	16.5	18.0	18.0	1.5	1.5	1.5	1.5	
Turkey	4.1	5.0	4.7	5.4	6.0	0.5	0.5	0.5	0.5	1.5
Other	1.8	1.2	2.0	3.0	2.4	0.2	0.2	0.2	0.2	0.2
Total	117.5	119.9	130.6	134.2	122.7	10.0	10.0	10.1	9.5	
AMERICA										
Canada	302.0	357.2	394.8	376.3	387.2	39.1	27.9	29.1	29.8	
U.S.A.	481.0	540.3	546.7	584.9	567.7	46.0	50.2	54.5	50.3	
Argentina	35.0	37.0	36.0	37.3	36.0	3.0	3.0	3.0	3.0	
Bolivia ⁽¹⁾	25.0	26.0	23.3	18.8	20.4	1.7	1.7	1.7	1.7	
Brazil	22.2	13.8	22.8	23.7	24.0	2.0	2.0	2.0	2.0	
Mexico	166.4	171.6	173.7	178.0	166.0	14.0	14.0	14.0	14.0	14.0
Peru	155.0	164.0	147.4	189.0	192.0	16.0	16.0	16.3	16.3	16.3
Other	16.0	25.0	27.0	20.6	24.0	2.0	2.0	2.5	2.5	2.5
Total	1 202.6	1 339.9	1 371.7	1 428.6	1 417.3	123.8	116.8	123.1	119.6	
AUSTRALASIA										
Australia	452.0	456.7	403.6	398.9	396.5	32.5	25.3	16.3	23.7	
New Zealand	1.0	1.0	1.0	2.0	1.0	-	-	-	-	
Total	453.0	457.7	404.6	400.9	397.5	32.5	25.3	16.3	23.7	
TOTAL	2 456.7	2 610.2	2 580.6	2 646.5	2 610.9	225.5	203.9	207.8		
Monthly Average	204.7	217.5	215.1	220.5	217.6					
OTHER COUNTRIES										
Bulgaria	91.2	95.5	100.0	102.0	108.0	9.0	9.0	9.0	9.0	9.0
Czechoslovakia*	7.1	6.9	6.2	6.0	6.0	0.5	0.5	0.5	0.5	0.5
Germany, Democratic Republic*	10.0	10.0	5.0	5.0	6.0	0.5	0.5	0.5	0.5	0.5
Poland	60.0	67.0	70.0	70.0	72.0	6.0	6.0	6.0	6.0	6.0
Roumania*	40.0	40.0	40.0	40.0	42.0	3.5	3.5	3.5	3.5	3.5
U.S.S.R.*	45.0	470.0	485.0	495.0	504.0	42.0	42.0	42.0	42.0	42.0
China P.R.*	104.0	110.0	120.0	125.0	126.0	10.5	10.5	10.5	10.5	10.5
North Korea*	55.0	70.0	70.0	75.0	72.0	6.0	6.0	6.0	6.0	6.0
Total	817.3	869.4	896.2	918.0	936.0	78.0	78.0	78.0	78.0	78.0
WORLD TOTAL	3 274.0	3 479.6	3 476.8	3 564.5	3 546.9	303.5	281.9	285.8		
Monthly Average	272.8	290.0	289.7	297.0	295.6					

In this table the accounting is based on the lead content by analysis of lead ores and concentrates plus the lead content of mixed ores and concentrates known to be intended for treatment for lead recovery. Some of the data for the latest months are provisional.

Notes: (1) Exports

LEAD

World Refined Production

THOUSAND METRIC TONS

	1969	1970	1971	1972	1973	1973		1974		
						Nov	Dec	Jan	Feb	Mar
EUROPE										
Austria	11.8	13.5	14.0	15.5	15.2	1.3	1.3	1.3	1.3	1.4
Belgium	97.2	89.4	79.3	92.8	97.7	8.1	9.1	7.9	8.3	11.5
Denmark	12.0	16.0	11.4	12.0	13.2	2.4	1.5	1.0	1.0	1.4
France	155.8	170.0	158.5	186.9	186.4	17.5	16.4	17.3	15.1	18.2
Germany, Federal Republic	305.3	305.4	302.0	273.4	302.6	27.4	27.4	28.4	25.1	27.5
Greece	9.6	9.7	19.8	20.4	20.7	1.8	1.8	1.6	1.5	1.6
Italy	80.0	79.3	75.8	69.2	57.9	5.5	5.0	5.0	3.5	4.0
Netherlands	14.8	17.9	23.6	24.3	33.4	2.1	2.4	3.0	2.4	2.4
Norway	1.2	1.0	1.0	0.7	1.2	0.1	0.1	0.1	0.1	0.1
Portugal	1.1	0.6	1.2	1.2	1.6	0.1	0.1	0.1	0.1	0.1
Spain	92.9	90.0	92.8	104.0	99.8	7.0	7.4	6.4	7.4	5.3
Sweden	59.5	57.1	44.8	49.3	48.6	2.7	4.6	5.3	2.2	3.7
United Kingdom	260.5	287.0	263.6	279.6	265.1	23.2	19.4	24.6	21.9	25.7
Yugoslavia	105.9	97.4	99.1	87.5	98.0	8.9	9.2	9.5	8.9	
Total ..	1 208.6	1 234.3	1 186.9	1 207.8	1 241.4	108.1	105.7	111.5	98.8	
AFRICA										
Morocco	26.8	24.9	13.7	-	-	-	-	-	-	-
South West Africa	69.3	67.9	69.8	64.7	66.7	4.3	3.2	7.0		
Tunisia	16.1	21.4	18.6	25.9	26.4	2.2	2.2	2.3		
Zambia	23.1	27.6	28.3	30.2	25.4	2.0	2.0	2.0	2.1	2.3
Total ..	135.3	141.8	135.6	120.8	118.5	8.5	7.4	11.3		
ASIA										
Burma	10.0	11.0	12.0	9.5	12.0	1.0	1.0	1.0	1.0	1.0
India	2.2	2.2	2.4	2.7	2.4	0.2	0.2	0.2	0.2	0.2
Japan	186.6	209.0	215.1	223.2	228.5	19.3	19.2	17.7	18.0	20.3
Turkey	1.2	4.0	2.3	2.4	3.2	0.2	0.2	0.2	0.2	0.2
Other Asia	3.8	3.6	3.3	3.5	3.6	0.3	0.3	0.4	0.4	0.4
Total ..	203.8	229.8	235.0	241.3	249.7	21.0	20.9	19.5		
AMERICA										
Canada	169.8	165.6	168.3	186.9	186.9	17.1	17.6	18.1	16.8	12.9
U.S.A.	715.1	741.4	715.9	776.2	806.2	67.1	62.3	63.2	66.1	
Argentina	41.0	42.0	43.8	39.6	37.8	3.3	3.3	3.3		
Brazil	18.0	17.8	28.8	47.0	32.8	1.3	1.3	1.3		
Mexico	169.5	174.7	154.7	161.3	175.9	16.1	19.5	18.3		
Peru	77.5	72.0	67.1	85.6	83.1	6.8	6.9			
Total ..	1 190.9	1 233.5	1 178.6	1 295.6	1 322.7	111.7	110.9			
AUSTRALIA	221.2	212.9	193.4	209.7	220.0	18.2	22.0	21.3	18.3	20.7
TOTAL ..	2 959.8	3 052.3	2 930.5	3 076.2	3 152.3	267.5	266.9			
<i>Monthly Average ..</i>	<i>246.7</i>	<i>254.4</i>	<i>244.2</i>	<i>256.4</i>	<i>262.7</i>					
OTHER COUNTRIES										
Bulgaria	95.1	98.6	102.0	102.0	108.0	9.0	9.0	9.0	9.0	9.0
Czechoslovakia*	18.3	17.6	17.6	18.0	18.0	1.5	1.5	1.5	1.5	1.5
Germany, Democratic Republic*	25.0	25.0	20.0	20.0	18.0	1.5	1.5	1.5	1.5	1.5
Poland	48.7	54.5	60.2	62.0	66.0	5.5	5.5	5.5	5.5	5.5
Roumania*	35.0	40.0	40.0	40.0	42.0	3.5	3.5	3.5	3.5	3.5
U.S.S.R.*	520.0	540.0	560.0	570.0	570.0	47.5	47.5	47.5	47.5	47.5
China P.R.*	100.0	110.0	120.0	125.0	132.0	11.0	11.0	11.0	11.0	11.0
North Korea*	55.0	55.0	55.0	60.0	60.0	5.0	5.0	5.0	5.0	5.0
Total ..	897.1	940.7	974.8	997.0	1 014.0	84.5	84.5	84.5	84.5	84.5
WORLD TOTAL ..	3 856.9	3 993.0	3 905.3	4 073.2	4 166.3	352.0	351.4			
<i>Monthly Average ..</i>	<i>321.4</i>	<i>332.8</i>	<i>325.4</i>	<i>339.4</i>	<i>347.2</i>					

In this table accounting is based on production of refined pig lead including the lead content of primary antimonial lead and excluding remelted pig lead and secondary antimonial lead. Some of the data for the latest months are provisional.

World Refined Consumption

THOUSAND METRIC TONS

	1969	1970	1971	1972	1973	1973			1974	
						Oct	Nov	Dec	Jan	Feb
EUROPE										
Austria	23.9	30.4	28.6	29.5	29.9	2.7	2.7	2.7		
Belgium	53.8	46.4	49.2	48.1	51.1	4.4	4.4	4.4		
Denmark	19.8	27.0	23.3	20.4	19.9	1.7	1.7	1.7		
Finland	9.7	10.5	9.8	12.0	13.0	1.0	1.0	1.0		
France	198.5	192.5	188.4	202.0	216.6	21.1	19.3	19.0		
Germany, Federal Republic	311.4	306.3	286.5	273.5	289.6					
Greece	9.7	24.4	27.0	39.1	40.0	3.3	3.3	3.3		
Irish Republic	1.2	1.0	1.0	2.3	2.0	0.2	0.2	0.2		
Italy	146.0	168.0	178.0	186.0	188.0	14.5	14.5	14.5		
Netherlands	49.8	49.7	49.2	41.4	41.6	3.4	3.4	3.4		
Norway	12.0	12.5	12.5	12.5	12.4	1.0	1.0	1.0		
Portugal	10.0	10.4	10.0	10.0	10.0	0.8	0.8	0.8		
Spain	77.0	77.5	74.1	107.0	111.9	9.0	9.0	9.0		
Sweden	54.9	47.1	42.9	33.5	33.4	3.1	3.1	3.1		
Switzerland	25.8	25.8	22.3	21.8	16.6	2.7	1.2	2.0	2.6	
United Kingdom	275.3	261.7	276.7	278.4	282.2	25.2	26.0	21.5	21.3	23.0
Yugoslavia	43.8	45.0	53.2	55.0	60.9	4.6	4.5	4.6		
Other Europe	0.1	0.1	0.1	0.1	0.1					
Total	1 322.7	1 336.3	1 330.8	1 372.6	1 418.2	116.1	114.9	116.2		
AFRICA										
South Africa	20.2	23.9	27.0	25.6	25.9	2.3	1.6	2.4	3.4	
Zambia	6.0	6.0	6.0	6.0	6.0	0.5	0.5	0.5	0.5	0.5
Other	12.0	14.0	13.0	17.0	18.0	1.5	1.5	1.5	1.0	1.0
Total	38.2	43.9	46.0	48.6	49.9	4.3	3.6	4.4	4.9	
ASIA										
India	30.2	41.5	33.0	42.1	42.0	3.5	3.5	3.5	4.0	4.0
Japan	187.6	210.5	209.7	231.1	251.9	22.3	22.9	22.8	19.7	22.3
Turkey	4.9	7.5	6.5	8.0	8.0	1.0	1.0	1.0	6.0	6.0
Other	35.0	36.0	40.0	40.0	43.0	4.0	4.0	4.0		
Total	257.7	295.5	289.2	321.2	349.9	30.8	31.4	31.3		
AMERICA										
Canada	65.4	54.7	54.7	63.7	61.7	5.0	5.0	5.0	5.0	5.0
U.S.A.	955.5	894.2	933.9	997.4	1 009.3	86.6	79.4	73.1		
Argentina	41.0	42.0	44.0	42.0	45.0	3.0	3.0	3.0	3.0	3.0
Brazil	26.0	20.9	30.4	53.0	47.0	4.5	4.5	4.5	2.0	2.0
Mexico	99.2	94.3	93.2	92.0	81.0	7.5	7.5	7.5	9.0	9.0
Peru	3.8	5.0	4.5	5.5	9.0	0.5	0.5	0.5	0.5	0.5
Other	12.0	12.0	12.0	10.0	12.0	1.0	1.0	1.0	2.0	2.0
Total	1 202.9	1 123.1	1 177.7	1 263.6	1 256.5	107.6	100.4	94.6		
AUSTRALASIA										
Australia	63.8	55.6	55.7	69.4	72.6	8.0	6.2	5.6	4.5	7.5
New Zealand	6.0	6.0	5.0	7.2	6.0	0.6	0.6	0.6	0.5	0.5
Total	69.8	61.6	60.7	76.6	78.6	8.6	6.8	6.2	5.0	8.0
TOTAL	2 891.3	2 860.4	2 904.4	3 082.8	3 153.1	267.4	257.1	252.7		
Monthly Average	240.9	239.4	242.0	256.9	262.8					
OTHER COUNTRIES*										
Bulgaria	66.6	76.5	80.0	80.0	84.0	7.0	7.0	7.0	7.0	7.0
Czechoslovakia	49.1	43.5	44.6	45.0	48.0	4.0	4.0	4.0	4.0	4.0
Germany, Democratic Republic	96.0	100.0	100.0	100.0	102.0	8.5	8.5	8.5	8.5	8.5
Hungary	12.0	14.0	14.8	15.0	12.0	1.0	1.0	1.0	1.0	1.0
Poland	76.0	70.0	65.5	74.6	72.0	6.0	6.0	6.0	6.0	6.0
Roumania	36.0	35.0	35.0	35.0	36.0	3.0	3.0	3.0	3.0	3.0
U.S.S.R.	460.0	486.0	515.0	530.0	537.6	44.8	44.8	44.8	44.8	44.3
Other Eastern Europe	2.0	2.0	2.0	2.0	2.4	0.2	0.2	0.2	0.2	0.2
China P.R.	130.0	160.0	170.0	180.0	130.0	15.0	15.0	15.0	15.0	15.0
North Korea	10.0	15.0	20.0	20.0	24.0	2.0	2.0	2.0	2.0	2.0
Total	937.7	1 002.1	1 046.9	1 081.6	1 098.0	91.5	91.5	91.5	91.5	91.5
WORLD TOTAL	3 829.0	3 862.5	3 951.3	4 164.2	4 251.1	358.9	348.6	344.2		
Monthly Average	319.1	321.9	329.3	347.0	354.3					

In this table the accounting is based on the consumption of refined pig lead and the lead content of antimonial lead. Remelted pig lead and remelted antimonial lead are excluded. Some of the data for the latest months are provisional.

LEAD

World Trade — Refined Lead

THOUSAND METRIC TONS

	1969	1970	1971	1972	1973			1974	
					Jan-Dec	Nov	Dec	Jan	Feb
EXPORTS									
Austria	2.5	1.9	2.8	0.7	1.9	0.2	0.2		
Belgium/Luxembourg	43.1	51.0	42.6	31.9	49.0 ⁽⁵⁾	3.4			
Belgium ⁽¹⁾	25.8	13.8	15.7	14.1	12.0	1.0			
Denmark	2.2	1.2	0.6	9.7	1.7	0.4	0.5	0.1	0.3
France	Soft Lead	10.3	13.9	10.5	9.8	9.2	0.6	1.0	1.1
	Antimonial	0.6	7.4	7.1	6.7	8.8	1.1	1.0	1.3
Germany, F.R.	Soft Lead	31.6	44.4	56.1	53.6	52.6	5.5	0.8	8.3
	Antimonial	4.6	4.2	3.9	5.3	9.6	0.9		1.3
Netherlands	Soft Lead	3.5	6.9	8.8	12.0	7.7 ⁽⁵⁾	0.7		
	Antimonial	10.0	7.2	8.2	9.4	14.2 ⁽⁵⁾	1.1		
Spain ⁽²⁾	0.2	0.1		0.3					
Sweden	9.2	8.7	25.2	35.3	26.7	6.0	3.0	1.9	
U.K.	94.4	97.5	89.6	95.9	86.6	5.5	12.6	5.7	
U.S.S.R. ⁽³⁾	93.0	95.2	93.2	92.5	97.0	15.1	6.6	1.6	
Yugoslavia	Soft Lead	60.3	48.6	49.5	37.6				
	Antimonial	1.0	1.1	0.7	0.6				
Morocco	26.3	22.5	16.1						
South Africa	55.2	43.3	61.0	40.3	42.7	3.6	2.2	2.7	5.4
Tunisia	14.0			1.2					
Zambia	23.0	22.5	25.2	25.3	19.3	2.2	0.3	2.3	1.1
Japan ⁽⁴⁾	2.4	5.6	5.3	4.7	4.3	0.8		0.1	0.6
Canada ⁽²⁾	97.1	138.6	124.2	127.8	113.6	10.8	10.4	12.8	9.4
Mexico	Soft Lead	73.0	94.0 ⁽³⁾	71.9	66.6				
	Antimonial	0.2							
Peru	74.5	65.8	61.0	80.1					
U.S.A. ⁽⁴⁾	0.9	4.1	2.4	4.7	45.2	5.5			
Australia	Soft Lead	134.7	138.9	155.5	137.5	90.6 ⁽⁶⁾			
	Antimonial	4.6							
Total	898.2	963.4	937.1	906.6	692.7				
IMPORTS									
Austria	14.6	19.3	15.4	14.8	15.4	1.3	1.3		
Belgium/Lux.	Soft Lead	7.6	9.9	11.4	9.4	5.7 ⁽⁵⁾	0.2		
	Antimonial	2.2	1.4	0.4	4.1	2.6 ⁽⁵⁾	0.4		
Denmark	10.0	10.8	12.0	9.2	8.4	0.7		2.1	0.7
Finland	8.7	10.3	7.6	11.7	9.4	1.3		1.4	0.2
France	Soft Lead	49.5	41.6	36.4	32.6	29.4	1.7	2.8	4.2
	Antimonial	5.0	6.0	3.2	5.9	7.1	0.4	1.1	0.4
Germany, F.R.	Soft Lead	45.9	42.4	33.7	49.4	38.1	1.8	2.0	6.5
	Antimonial	9.6	10.7	10.5	10.8	12.2	1.2	1.3	1.4
Irish Republic ⁽¹⁾	1.3	1.5	0.8	2.3	1.9 ⁽⁴⁾				
Italy	Soft Lead	58.0	109.9	94.0	107.1	107.6 ⁽⁵⁾	13.6		
	Antimonial	1.6	1.4	2.3	1.5	3.3 ⁽⁵⁾	0.2		
Netherlands	Soft Lead	31.9	30.9	25.2	17.4	34.6 ⁽⁵⁾	2.5		
	Antimonial	17.1	15.0	15.2	13.0	11.0 ⁽⁵⁾	1.9		
Norway	7.7	8.2	7.7	8.7	9.6	1.2	0.3	1.0	0.8
Poland	14.7	14.1	15.1	12.6	19.9	0.8	1.8		
Spain				3.5	5.6 ⁽⁴⁾				
Switzerland	26.0	26.0	22.9	21.8	17.0	1.2	2.0	2.6	2.9
Sweden	5.9	4.9	6.1	2.5	0.9	0.4	0.1	0.1	
U.K.	106.0	96.9	105.8	91.6	87.1	1.1	14.7	10.0	
U.S.S.R.	21.5	38.2	43.2	50.7	59.8	9.5			
Yugoslavia	4.6	5.3	8.9	4.8					
South Africa	7.3	6.4	8.1	9.8	4.7 ⁽⁴⁾				
India	26.1	30.4	22.3	37.5					
Japan	8.4	1.7	3.6	4.3	59.6	8.1	5.6	5.1	6.6
Canada ⁽²⁾	0.1	2.0	4.1	10.5	3.6	0.1	0.2	0.1	
U.S.A.	252.5	221.9	177.4	219.9	161.6	11.3	7.4	16.4	8.9
Total	743.8	787.1	693.3	787.4	716.1				

This table shows principal imports and exports of lead and lead alloys. More detailed information including countries of origin of import and destination of exports may be found for the major countries in the appropriate country tables. Totals shown represent information available at time of going to press.

- Notes: (1) Includes Alloys
 (2) Includes Shot
 (3) Includes Bullion
 (4) January to September
 (5) January to November
 (6) January to August

East/West Trade — Refined Lead

THOUSAND METRIC TONS

	1969	1970	1971	1972	1973	1973			1974
						Oct	Nov	Dec	Jan
EXPORTS FROM WESTERN COUNTRIES									
Belgium		2.8			4.5	0.4	0.2		
Denmark		0.4	0.4						
France			1.5	0.2					
Germany F.R.(1)	1.5	0.3	0.2		1.2		1.0		
Netherlands		0.5			7.6	1.5	0.6	0.5	
Sweden			1.0	0.4					
United Kingdom	43.7	28.2	11.2	8.9	16.9		2.0	7.0	
Yugoslavia	26.7	23.5	28.6	19.8					
South Africa		0.1	0.4	1.0	1.9			1.5	
Tunisia	1.8		0.5						
Japan		0.4	2.4						
Canada	0.2			1.1					
Mexico			0.4						
Peru			4.0	5.6					
TOTAL	73.9	56.2	50.6	37.0	32.1(2)	1.9(2)	3.8(2)	9.0(2)	
of which to:									
Czechoslovakia	0.4	1.2	5.0	5.6	4.2	0.4	0.1		
Germany, D.R.			2.3	0.6	2.3				
Hungary		0.5	0.6		0.2				
Poland	7.6	9.8	9.0	4.2	10.2	1.5	0.6	2.0	
Roumania				0.9					
U.S.S.R.	21.0	18.0	20.8	12.8	5.1				
China	44.9	26.7	10.6	12.9	10.0		3.0	7.0	
North Korea			2.3		0.1		0.1		
TOTAL	73.9	56.2	50.6	37.0	32.1(2)	1.9(2)	3.8(2)	9.0(2)	
EXPORTS FROM EASTERN COUNTRIES(1)									
Bulgaria	15.5	13.8	15.6	14.1	7.6(4)				
Czechoslovakia(3)	1.3								
Germany, D.R.	4.5	3.5	3.8	5.6	3.6	0.1	0.1		
Hungary	0.2	0.1		0.4					
Poland	0.1				1.3			0.5	
Roumania	2.2	2.0	1.2	1.0	0.2				
U.S.S.R.	6.7	5.7	5.6	7.0	7.1(4)				
North Korea	15.0	19.0	14.0	24.0	27.5	3.3	2.6	0.7	1.9
TOTAL	45.8	44.1	40.2	52.1	47.3(2)	3.4(2)	2.7(2)	1.2(2)	1.9(2)
of which to:									
Austria	1.6	2.3	2.1	2.5	3.3				
Belgium	1.6	0.1							
Denmark	0.2								
Finland	6.1	5.7	5.6	7.0	7.1				
France	1.3	0.6							
Germany, F.R.	14.1	20.7	6.1	12.2	15.3	2.1	2.1		
Greece			0.1						
Italy	8.6	9.5	10.3	17.1	8.6				
Netherlands	7.1	2.2	2.3	2.9	4.6	0.1	0.1		
Spain			1.5	4.1					
Switzerland	3.3	0.1	1.7	1.7	0.6				
United Kingdom	0.2		8.3	2.4	0.5			0.5	
Yugoslavia		1.9							
Algeria			0.2	0.3					
Egypt			0.4	0.7					
India					0.7				
Japan	1.7	1.0	1.6	0.2	6.5	1.2	0.5	0.7	1.9
Turkey					0.1				
U.S.A.				1.0					
TOTAL	45.8	44.1	40.2	52.1	47.3(2)	3.4(2)	2.7(2)	1.2(2)	1.9(2)

Notes: (1) Exports from Bulgaria, Poland and the U.S.S.R. are the official exports reported by the countries. Data for other countries is based on imports reported by Western countries.

(2) Totals shown represent information available at time of going to press.

(3) May include bullion.

(4) January to September.

LEAD

Principal End Uses

THOUSAND METRIC TONS

	1969	1970	1971	1972	1973	1973		
						Apr-June	July-Sept	Oct-Dec
AUSTRALIA (Primary Lead only)								
Storage Batteries	15.5	17.3	18.8	19.1	4.7			
Cable Sheathing	12.7	8.2	5.6	5.9	1.5			
Pipe and Sheet	3.7	3.8	3.9	4.8	1.2			
Pigments and Chemicals	4.9	3.8	4.5	4.9	1.3			
Alloys	5.7	5.7	6.4	6.3	1.8			
Miscellaneous	3.1	1.2	1.0	1.0	0.5			
Total ..	45.6	40.5	41.2	42.5	11.0⁽²⁾			
AUSTRIA								
Storage Batteries	6.1	8.2	8.5	8.0	8.0			
Cable Sheathing	10.4	12.3	13.0	14.2	13.3			
Pipes, Sheets, Shot and Foil	3.9	3.5	2.4	3.3	1.9			
Chemicals	3.5	3.5	3.5	4.0	5.9			
Alloys	0.8	1.5	0.5	1.0	0.5			
Miscellaneous	-	1.0	0.8	-	1.5			
Total ..	24.7	30.0	28.7	30.5	31.1			
BELGIUM								
Storage Batteries	13.0	8.1	8.5	9.8				
Cable Sheathing	21.5	16.6	16.5	17.4				
Miscellaneous Products	22.5	19.8	20.2	20.7				
Pigments and Chemicals	0.4	12.0	9.0	9.0				
Total ..	57.4	56.5	54.2	56.9				
of which: Refined Lead ..	53.8	46.4	49.2	48.1				
CANADA								
Antimonial Lead	2.0 ⁽¹⁾	1.3 ⁽¹⁾	19.2	29.0				
Storage Batteries	44.0	21.8	23.8	31.1				
Cable Sheathing	2.6 ⁽¹⁾	2.1 ⁽¹⁾	3.5	3.4				
Semi-Manufactures	10.9	8.3	5.6	5.8				
Chemicals	19.8 ⁽¹⁾	20.0 ⁽¹⁾	22.8	24.4				
Lead Alloys	7.3	8.5	6.3	5.9				
Miscellaneous	4.1	3.7	3.1	2.9				
Total ..	96.1	85.4	84.3	102.5				
of which: Refined Lead ..	65.4	54.7	54.7	63.7				
FINLAND								
Storage Batteries .. .. .	..	7.9	7.7	3.1	1.6			
Cable Sheathing .. .. .	..	2.3	2.1	9.4	4.5			
Other .. .. .	..	0.3	0.2	0.8	0.4			
Total ..		10.5	10.0	13.3	6.5⁽³⁾			
FRANCE								
Storage Batteries	86.7	86.7	97.0	102.0				
Cable Sheathing	42.0	37.7	40.8	40.0				
Pipes	14.0	12.8	11.0	10.0				
Sheet and Strip	14.0	14.1	14.9	15.1				
Foil	5.0	6.2	7.0	7.3				
Shot	10.0	10.0	11.0	11.5				
Tetraethyl	13.5	11.8	11.0	12.9				
Chemicals	22.8	30.5	28.5	32.0				
Alloys	17.0	15.7	15.3	15.0				
Miscellaneous	7.1	6.5	6.5	6.5				
Total ..	232.1	232.0	243.0	252.3				
of which: Refined Lead ..	198.5	192.5	188.4	202.0				
GERMANY								
Cable Sheathing	85.5	80.4	74.1	67.4	54.6	13.5	14.5	14.3
Storage Batteries	108.1	118.8	112.8	118.2	132.8	34.3	26.7	35.8
Pigments and Chemicals	64.5	68.0	58.9	70.0	79.0	20.0	19.6	20.5
Semi-Manufactures	58.5	51.1	49.7	49.5	49.6	12.5	11.3	12.6
Castings	6.9	5.8	5.1	5.2	5.5	1.5	1.2	1.6
Alloys	5.0	6.5	6.3	4.9	5.7	1.4	1.1	1.5
Protection of surfaces, powders, etc.	4.9	4.9	4.4	4.6	4.2	1.0	0.9	1.1
Collapsible tubes and capsules	3.2	3.0	2.8	3.2	17.3	..	5.1	7.3
Miscellaneous	24.7	20.4	17.4	2.9				
Total ..	361.3	358.9	341.5	325.9	348.7	84.2	80.4	94.7
of which: Refined Lead ..	311.4	306.3	286.5	273.5	289.6	63.7	66.3	85.0

Principal End Uses

THOUSAND METRIC TONS

	1969	1970	1971	1972	1973	1973		
						Apr-June	July-Sept	Oct-Dec
ITALY								
Cable Sheathing	24.0	27.0	29.5	32.0				
Storage Batteries	43.8	52.3	56.0	65.0				
Sheet	12.0	11.1	11.1	12.1				
Pipe	24.0	28.2	25.7	27.3				
Shot	13.0	15.2	18.7	19.2				
Other Semi-Manufactures	1.0	1.0	1.0	2.0				
Alloys	5.0	5.5	6.0	5.7				
Tetraethyl	10.1	15.3	15.3	15.0				
Chemicals	25.7	28.3	33.9	40.0				
Miscellaneous	5.4	6.1	5.2	5.7				
Total	164.0	190.0	208.0	224.0				
of which: Refined Lead	146.0	168.0	178.0	186.0				
JAPAN (Refined and Remelted)								
Cable Sheathing	27.2	27.8	29.1	17.5	16.5	4.6	4.3	3.3
Storage Batteries	103.6	110.4	115.7	86.5	103.3	21.9	25.6	31.6
Pipe and Sheet	37.8	35.3	33.7	25.1	33.8	10.9	6.7	8.3
Chemicals	46.9	61.9	69.9	72.5	64.0	16.6	12.4	15.5
Anti-friction Metal and Solder	14.7	18.7	20.2	14.3	17.7	4.3	4.4	4.9
Miscellaneous	22.9	25.0	25.3	15.2	16.6	4.0	4.3	4.4
Total	253.1	279.1	285.0	231.1	251.9	62.3	57.7	68.0
of which: Refined Lead	187.6	210.5	209.7	231.1	251.9			
NETHERLANDS								
Storage Batteries and Cable Sheathing	45.0	45.0	46.0					
Pipe and Sheet	17.0	18.0	18.0					
Pigments and Chemicals	6.0	5.0	5.0					
Miscellaneous (including alloys)	6.0	6.0	6.0					
Total	74.0	74.0	75.0					
of which: Refined Lead	49.3	49.7	49.2					
SWEDEN								
Storage Batteries	20.4	20.9	21.0					
Cable Sheathing	19.3	13.5	16.0					
Pipe and Sheet	0.5	0.5	0.5					
Pigments and Chemicals	2.6	3.1	3.3					
Alloys	2.0	2.3	2.4					
Miscellaneous	4.3	4.3	4.1					
Total	49.6	49.6	47.3					
UNITED KINGDOM								
Batteries	99.5	94.7	101.3	100.4	106.5	27.9	23.9	29.1
Cables	66.5	50.4	51.9	48.8	45.8	11.8	10.3	11.1
Tetraethyl	39.5	40.4	44.0	49.8	54.4	13.9	13.9	14.3
Other Oxides and Compounds	32.3	31.6	36.6	30.5	37.1	9.1	7.3	9.2
White Lead	3.5	3.0	3.2	3.1	1.7	0.4	0.4	0.4
Shot	6.2	6.3	6.5	7.1	7.4	1.8	1.6	2.0
Sheet, Foil and Pipe	59.2	53.5	54.2	55.2	55.4	14.5	13.2	13.3
Collapsible Tubes	1.8	2.0	2.1	1.7	1.4	0.3	0.4	0.4
Other Rolled and Extruded	2.1	2.0	1.8	1.9	0.9	0.3	0.2	0.2
Alloys	35.2	34.3	31.0	36.1	35.1	9.4	8.7	7.8
Miscellaneous	21.5	22.1	19.9	20.5	18.4	4.5	4.7	4.6
Total	367.1	350.3	345.1	354.9	364.1	93.9	85.1	92.4
of which: Refined Lead	275.3	261.7	275.7	278.4	282.2	68.6	64.4	72.6
U.S.A.								
Ammunition	71.9	66.0	79.4	76.8	73.8	21.2	13.7	17.3
Bearing Metals	15.8	14.8	14.8	14.4	12.7	3.4	3.1	3.1
Brass and Bronze	19.5	17.2	18.2	18.0	17.6	4.5	3.8	4.3
Cable Covering	49.2	46.1	48.0	41.7	38.2	10.4	8.3	9.6
Caulking Lead	40.7	31.4	27.2	20.4	15.0	3.4	3.3	3.3
Casting Metals	9.0	6.3	6.6	6.5	3.7	1.4	0.6	0.7
Collapsible Tubes	11.3	9.9	9.1	3.6	2.2	0.6	0.5	0.6
Sheet and Foil	28.7	24.1	29.0	25.7	22.9	6.1	3.8	5.9
Pipes, Traps, Bends	17.6	16.2	15.5	16.1	16.6	5.4	2.4	3.3
Solder	65.9	63.2	62.5	64.7	56.3	13.9	13.2	11.3
Type Metal	23.3	22.3	20.2	18.5	17.4	4.1	4.3	5.0
Storage Batteries	528.1	538.1	616.7	659.2	604.1	146.4	138.4	157.3
Pigments	92.9	89.5	73.7	60.9	97.5	24.6	24.0	26.4
Tetraethyl	246.0	252.7	223.7	252.5	243.9	61.8	61.3	60.6
Other Chemicals	0.5	0.6	0.4	0.8	...	...	...	...
Miscellaneous	39.6	35.1	35.6	47.6	119.1	27.9	32.2	34.9
Total	1 260.4	1 234.3	1 225.6	1 347.4	1 346.0	335.1	312.9	346.6
of which: Refined Lead	955.5	894.2	923.9	982.7	902.2	214.6	214.2	239.1

This table illustrates principal uses of lead in those countries for which information is available. For some countries, annual statistics only are prepared at present. Unless otherwise indicated, the statistics cover total use of lead in all forms, including the direct use of lead contained in scrap.

Notes: (1) Includes consumption of primary lead only, for this end use. Data for secondary consumption is included in the total.

(2) January to March.

(3) January to June only.

France

METRIC TONS

	1970	1971	1972	1973	1974				
					Jan-Mar	Jan	Feb	Mar	
UNWROUGHT									
Production									
Ores and Concentrates:									
Content by analysis	23 206	23 456	25 518	25 002	2 007 ⁽⁵⁾	2 007			
Recoverable content	27 537	28 277	25 294	23 702	1 907 ⁽⁵⁾	1 907			
Primary Refined Soft Lead	119 900	106 300	135 133	129 730	33 957	11 472	9 873	12 612	
Secondary Refined Soft Lead	18 200	18 690	17 051	19 819	4 689 ⁽⁶⁾	2 512	2 177		
Antimonial Lead (Refined content)	31 900	33 327	33 459	36 800	6 335 ⁽⁶⁾	3 334	3 001		
Refined Lead	Total	170 000	158 487	186 853	186 410	50 558	17 318	15 051	18 189
Remelted Soft Lead	4 700	6 200	6 539	8 667	617 ⁽⁵⁾	617			
Imports									
Lead Bullion	2 523	2 032	1 701	1 201	476	148	78	250	
Refined Lead	Total	41 657	36 376	32 533	29 359	11 251	4 186	4 647	2 418
of which from:									
Belgium	11 045	9 587	11 318	15 492	5 206	1 984	2 065	1 177	
Bulgaria	590	101	1 999	-	-	-	-	-	
Germany, F.R.	245	7 577	4 947	3 154	1 584	520	784	280	
Morocco	18 010	11 075	-	-	-	-	-	-	
Tunisia	3 770	1 890	5 770	109	-	-	-	-	
United Kingdom	6 831	1 577	6 230	3 935	3 445	1 221	1 354	370	
Other	985	4 159	1 719	2 558	1 016	481	444	91	
Antimonial Lead	Total	6 024	3 155	5 904	7 033	1 847	450	592	805
of which from:									
Belgium	320	454	393	252	39	-	39	-	
Germany, F.R.	3 440	1 939	3 643	4 575	912	70	437	405	
Tunisia	530	237	972	1 245	400	-	-	400	
Other	1 734	525	936	1 011	496	380	116	-	
Scrap	6 224	5 490	13 393	12 616	6 484	2 840	3 144	2 800	
Exports									
Lead Ore (gross weight)	2 168	1 155	94	105	27	14	1	12	
Lead Bullion	Total	776	10 621	699	1 819	58	-	-	58
of which to:									
Belgium	424	714	58	1 362	-	-	-	-	
Germany, F.R.	65	45	19	1	-	-	-	-	
Other	287	9 262 ⁽²⁾	612 ⁽³⁾	450	58	-	-	58	
Refined Lead	Total	13 984	10 450	9 770	9 177	2 395	1 073	690	627
of which to:									
Algeria	832	485	123	117	-	-	-	-	
Belgium	1 621	3 584	642	20	-	-	-	-	
Germany, F.R.	2 042	1 129	570	3 200	226	89	68	65	
Greece	2 156	-	-	400	-	-	-	-	
Italy	2 343	630	234	269	196	65	21	20	
Switzerland	2 030	1 582	1 933	1 923	925	310	340	275	
U.S.A.	1 251	-	-	-	50	-	50	-	
Other	1 754	3 068	6 157 ⁽¹⁾	2 643	1 088	614	210	264	
Antimonial Lead	Total	7 383	7 130	6 707	8 787	3 172	1 347	716	1 109
of which to:									
Algeria	88	89	-	455	186	57	129	-	
Germany, F.R.	6 231	2 314	2 356	4 128	1 947	942	216	780	
Other	1 064	4 727	4 321	4 204	1 039	348	371	320	
Scrap	22 335	9 417	14 139	18 503	6 989	1 490	2 094	3 405	
Consumption (Refined Lead)	192 500	188 400	202 000	216 600					
MANUFACTURES									
Production									
Tubes	12 432	11 022	9 977	8 611	2 229	731	652	846	
Sheets and Rods	14 012	14 443	14 534	12 772	3 087	999	1 005	1 082	
Shot and Wire	7 596	7 755	7 663	7 877	2 353	739	757	857	
	Total	34 040	33 220	32 419	29 260	7 669	2 465	2 415	2 785
Imports									
Lead Sheet and Forgings	227	395	415						
Lead Pipes	163	44	81						
Exports									
Lead Sheet and Forgings	834	836	630	314					
Lead Pipes	369	204	442	126					
Other manufactures of Lead	414	407	513	141					

Notes (1) July and August include exports to India of 1 000 and 2 300 tons respectively.

(2) Includes exports to Italy of 9 842 tons.

(3) Includes exports to Italy 497 tons.

(4) January to March.

(5) January only.

(6) January to February.

LEAD

Germany, F.R.

METRIC TONS

	1970	1971	1972	1973	1973			1974
					Oct	Nov	Dec	Jan
UNWROUGHT								
Production								
Mine Production	50 000	49 800	46 200	41 933	3 860	3 431	2 794	3 687
content by analysis recoverable content	38 394	39 350	38 458	33 533	3 160	2 731	2 094	2 947
Refined Production (1)	305 428	301 113	273 443	302 577	29 826	27 454	27 436	28 463
of which antimonial lead (1)	44 168	44 913	31 031	42 704	3 363	3 035	2 811	4 571
Imports								
Lead Ore	283 307	223 009	200 859	162 265	12 534	20 139	13 813	12 890
of which from:								
Bolivia	9 410	18 902	9 711	5 505	-	1 019	-	-
Canada	73 615	73 449	31 967	27 912	3 234	8 508	-	-
Irish Republic	48 240	33 486	56 663	43 251	4 491	3 495	4 838	2 398
Peru	38 974	42 612	37 879	4 924	-	1 154	-	1 006
Sweden	48 994	30 136	35 219	42 168	4 245	850	6 051	6 050
Other	64 074	24 424	30 320	39 505	564	5 112	2 924	3 436
Lead Bullion	71 793	80 704	60 479	83 569	7 408	4 369	7 606	3 306
of which from:								
Australia	10 153	14 918	19 129	12 630	1 778	-	1 428	1 607
United Kingdom	39 333	46 642	22 933	33 496	3 551	-	3 604	1 654
Other	21 707	19 144	13 417	37 243	2 079	4 869	2 574	45
Refined Lead:	42 392	53 714	49 336	38 140	1 651	1 799	2 033	6 501
of which from:								
Australia	6 320	4 999	4 827	5 104	449	-	152	1 799
Belgium	8 142	4 321	4 272	7 155	503	506	855	449
Canada	4 044	2 617	6 742	3 036	100	250	87	1 164
Netherlands	5 289	6 675	7 463	5 624	375	430	488	338
Switzerland	11 276	9 179	10 257	11 757	25	505	155	2 125
Other	7 321	5 923	15 835	5 464	199	108	296	626
Antimonial Lead	10 650	10 801	10 563	12 207	1 629	1 172	1 248	1 402
Other Lead Alloys	3 428	2 479	2 428	2 226	95	116	203	150
Scrap	26 314	13 232	17 052	31 007	2 273	3 640	5 281	3 590
Exports								
Lead Ore	1 884	2 805	1 548	645	-	-	645	719
Lead Bullion	1 375	3 574	4 326	985	128	90	108	21
Refined Lead	44 398	56 136	53 594	52 572	6 152	5 520	792	8 286
of which to:								
Austria	3 326	1 393	677	2 150	210	50	75	-
Belgium	3 889	5 766	4 187	2 570	697	509	215	40
France	1 506	6 176	4 725	4 920	510	250	-	280
Italy	25 891	19 171	32 252	29 813	3 590	3 166	500	6 096
Netherlands	3 377	18 756	2 690	7 180	535	27	-	-
Switzerland	3 935	2 792	3 198	2 430	253	203	-	370
U.S.A.	-	-	-	-	-	-	-	-
Other	2 474	2 082	5 855	3 509	357	1 315	2	1 500
Antimonial Lead	4 219	3 911	5 300	9 594	930	937	50	1 134
of which to:								
France	3 384	2 516	4 057	3 289	250	325	-	648
Netherlands	146	201	323	-	-	-	-	51
Other	689	1 194	920	6 305	680	612	50	435
Other Lead Alloys	2 635	8 513	3 425	2 721	262	260	144	304
Scrap	15 524	15 409	14 919	15 343	1 340	1 586	943	1 383
Consumption Refined Lead	306 300	286 500	273 500	289 600				
MANUFACTURES								
Production Lead and Lead Alloy								
Semi-manufactures	44 146	44 298	43 314	41 179	4 211	3 483	2 917	3 369
Castings	6 788	5 894	6 071	6 685	542	607	586	709
Imports								
Lead and Lead Alloy								
Rods, Bars and Sections and Wire	680	403	268	251	11	1	46	6
Plate, Sheet and Strip	1 469	1 931	2 042	2 002	266	280	101	154
Foil	50	28	14	12	1	3	-	1
Tubes and Tube Fittings	192	156	138	72	-	-	-	2
Powder and Flake	90	429	455	417	42	83	7	27
Total	2 481	2 947	2 917	2 764	320	367	154	190
Exports								
Lead and Lead Alloy								
Rods, Bars and Sections and Wire	1 038	685	639	804	68	73	146	192
Plate, Sheet and Strip	2 899	3 444	3 680	4 328	429	661	489	543
Foil	777	1 021	1 093	1 669	169	168	206	204
Tubes and Fittings	369	830	977	1 235	91	233	42	313
Powder and Flake	153	154	184	197	45	20	15	5
Total	5 836	6 104	6 563	8 233	802	1 175	898	1 257

Notes (1) Includes secondary antimonial lead produced at primary plants

METRIC TONS

	1970	1971	1972	1973	1974			
					Jan-Mar	Jan	Feb	Mar
UNWROUGHT								
Production								
Ores and Concentrates (content by analysis) ..	64 400	70 600	63 600	52 900	11 005	4 000	3 414	3 591
Refined Lead Total ..	209 090	215 100	223 200	228 000	55 999	17 652	18 046	20 301
of which: Primary	174 800	179 500	192 100	189 400				
Secondary	34 200	35 200	31 100	38 600				
Remelted Lead	65 600	63 497	72 074	116 017				
Imports								
Ores and Concentrates Total ..	210 157	225 427	198 948	242 753	40 610	10 217	21 284	9 109
of which from:								
Australia	22 801	18 557	10 576	25 027	-	-	-	-
Canada	125 409	153 860	141 647	157 837	25 148	8 025	12 502	4 621
Korea Republic	17 863	18 822	16 973	15 495	2 740	640	800	1 300
Peru	27 519	27 448	25 702	36 852	10 236	1 552	5 496	3 189
Iran	3 110	2 970	1 800	-	2 486	-	2 486	-
Bolivia	3 600	-	-	-	-	-	-	-
U.S.A.	5 131	-	-	6 082	-	-	-	-
New Zealand	2 430	2 455	2 136	1 460	-	-	-	-
Other	2 224	1 315	114	-	-	-	-	-
Refined Lead Total ..	1 693	3 588	4 320	59 560	16 458	5 138	6 613	4 707
of which from:								
Canada	296	-	200	1 354	390	-	388	2
Australia	-	-	-	9 119	4 341	1 164	1 486	1 691
N. Korea	982	1 580	392	6 514	4 260	1 850	2 410	-
S.W. Africa	100	993	891	1 943	897	598	-	299
Mexico	-	415	617	383	-	-	-	-
Peru	-	-	1 487	5 497	1 528	-	598	930
U.S.A.	8	500	-	29 230	4 785	1 495	1 703	1 586
Other	307	100	733	4 520	257	30	28	199
Lead Scrap	2 639	1 759	4 133	7 925	764	368	195	201
Lead Alloys (containing Antimony)	473	50	921	4 920	1 751	524	880	350
Exports								
Refined Lead and Lead Alloys Total ..	5 652	5 337	4 722	4 272	708	51	560	77
of which to:								
China P.R.	400	100	-	-	-	-	-	-
Taiwan	1 079	1 535	1 809	269	1	-	1	-
Korea Republic	1 762	2 283	1 637	626	211	31	121	59
Thailand	659	5	204	4	0	-	-	-
South Vietnam	564	422	350	141	-	-	-	-
India	359	128	-	2 994	158	-	458	-
Other	829	404	722	248	38	20	-	18
Stocks								
Refined Lead at Producers	12 099	21 213	15 233	6 577	5 859	6 508	5 859	-
Consumption								
Refined Lead	210 455	209 700	231 100	251 830	41 994	19 738	22 206	-
MANUFACTURES								
Production								
Sheets	9 651	8 309	8 676	3 980	2 041	650	654	723
Tubes	28 330	26 745	27 133	23 413	6 547	2 320	2 259	1 968
Bearing Metal	3 744	3 781	3 991	3 943	871	312	295	264
Solder	25 759	24 140	26 336	39 403	7 085	2 400	2 418	2 267
Batteries	149 935	180 258	166 860	198 802	52 569	17 437	18 168	16 964
Red Lead	13 755	13 009	14 860	15 508	4 311	1 224	1 653	1 434
Litharge	38 025	37 000	44 782	49 928	10 102	3 245	3 103	3 814
White Lead	1 468	1 400	1 449	1 218	-	-	-	-
Exports								
Semi-manufactures:								
Plates, Sheet and Strip	17	133	35	73	6	-	4	2
Tubes	509	258	100	22	-	-	-	-
Rods, Bars, Sections and Wire	328	108	56	89	13	6	1	6
Total	914	499	191	184	19	6	5	8
Foil, Powders and Flakes	33	52	19	21	13	4	4	5

Note (1) January to February

LEAD

United Kingdom

1 Summary

METRIC TONS

	1970	1971	1972	1973	1974			
					Jan-Mar	Feb	Mar	Apr
UNWROUGHT								
Production								
Lead Bullion	43 769	38 628	25 052	30 306	7 099	2 066	3 047	2 389
Refined Lead	286 984	263 592	270 621	255 126	72 196	21 862	25 724	25 467
of which:								
Primary ⁽¹⁾	140 291	120 821	121 000	120 117	37 937	11 067	13 624	12 923
Secondary ⁽²⁾	146 633	142 771	149 621	145 009	34 259	10 795	12 100	12 544
Imports								
Ores and Concentrates	35 353	42 976	22 774	30 611	4 462	-	231	1 218
Lead Bullion	158 592	124 418	111 067	126 659	11 600 ⁽⁴⁾			
Refined Lead	96 945	105 758	91 640	87 112	10 047 ⁽⁴⁾			
Lead and Alloy Scrap	4 538	2 776	3 034	2 630	61 ⁽⁴⁾			
Exports (Inc. Re-Exports)								
Lead Bullion	39 728	41 462	22 050	30 997	1 690 ⁽⁴⁾			
Refined Lead	97 620	89 141	95 918	86 555	5 699 ⁽⁴⁾			
Lead Alloys (incl. Type Metal)	14 930	20 580	25 798	27 583	1 052 ⁽⁴⁾			
Lead and Alloy Scrap	370	196	550	7 422	1 983 ⁽⁴⁾			
Consumption								
Refined Lead — Imported	153 160	152 298	143 186	160 332				
Secondary English Refined ⁽²⁾	108 561	124 401	135 167	121 859				
Total Refined	261 721	276 699	278 353	282 191	67 902	22 976	23 633	23 924
Scrap and Remelted Lead	88 529	63 686	76 591	81 930	13 494 ^r	2 803	6 438 ^r	4 696
Total all forms	350 250	346 385	354 944	364 121	81 396 ^r	25 779	30 071 ^r	28 620
Stocks								
Lead Bullion	24 786	22 595	21 336	13 991				
Refined Lead — Imported	80 807	79 598	80 831	72 702				
English ⁽¹⁾	19 571	25 046	10 890	3 205				
Total	125 169	127 239	113 057	89 898				
of which:								
at Consumers	20 463	19 983	17 844	11 160	13 260	14 520	13 260	15 495
in L.M.E. Warehouses (U.K.)	18 000	23 350	12 075	12 750	13 725	13 350	13 725	13 325
Other ⁽³⁾	86 706	83 956	83 138	65 988				
MANUFACTURES								
Exports								
Rods and Wire	436	289	464	618	31 ⁽⁴⁾			
Sheet and Strip	714	1 136	637	866	131 ⁽⁴⁾			
Tubes and Pipes	835	748	471	312	20 ⁽⁴⁾			
Foil, Powders and Flakes	381	426	752	1 031	9 ⁽⁴⁾			
Red and Orange Lead	3 753	3 463	4 747	5 362	442 ⁽⁴⁾			
Other Lead Oxides	3 624	2 866	4 740	4 093	363 ⁽⁴⁾			

Notes (1) Refined lead produced from imported bullion, including the lead content of alloys
 (2) Soft lead refined from scrap and other secondary materials, including that refined by consumers for their own use. Secondary antimonial (hard) lead recovered from scrap, whether for sale or own use, is not included in production but is counted in consumption of scrap when used by ultimate consumer
 (3) 'Other' stocks are mainly stocks at refineries, stocks at ports, in private warehouses, and stocks in transit to consumers in U.K.; except that stocks at consumer operated refineries are included in Consumers' stocks
 (4) January only

2 Consumption and Uses of Lead

END USE	1970	1971	1972	1973	1974			
					Jan-Mar	Feb	Mar	Apr
Cables	60 405	51 916	48 579	45 831	10 941 ^r	3 487	4 251 ^r	4 131
Batteries—as metal	48 779	49 779	50 828	54 188	7 985	2 809	3 051	2 923
Battery Oxides ⁽¹⁾	45 876	51 502	49 622	52 343	12 845	4 389	4 673	4 536
Lead Alkyl Anti-Knock Compounds	40 372	44 029	43 838	54 370	14 272	4 594	4 690	4 404
Other Oxides and Compounds	31 611	30 542	30 471	37 129	7 628	2 059	3 092	3 027
White Lead	2 982	3 238	3 057	1 711	344	101	120	108
Shot (incl. Bullet Rod)	6 285	6 499	7 061	7 411	1 518	332	705	707
Sheet and Pipe	53 101	53 988	55 133	55 312	11 849	3 574	4 924	4 420
Foil	414	148	118	93	26	11	10	10
Collapsible Tubes	2 042	2 060	1 717	1 428	357	119	119	119
Other Rolled and Extruded	1 981	1 832	1 932	863	227	75	75	70
Solder	13 994	14 418	15 952	16 438	4 127	1 373	1 342	1 269
Alloys	20 292	16 553	20 177	18 613	4 653	1 304	1 477	1 380
Miscellaneous Uses	22 116	19 882	20 459	18 391	4 624	1 552	1 542	1 516
Total Consumption	350 250	346 385	354 944	364 121	81 396^r	25 779	30 071^r	28 620
of which Refined Lead	261 721	276 699	278 353	282 191	67 902	22 976	23 633	23 924

Note (1) Mainly Grey Oxide

United Kingdom

3 Imports and Exports of Unwrought Lead

METRIC TONS

	1970	1971	1972	1973	1973			1974
					Oct	Nov	Dec	Jan
IMPORTS								
Ores and Concentrates (Lead Content)								
Australia	9 190	18 422	-	16 379	3 683	-	-	-
Bolivia	-	-	641	-	-	-	-	-
Canada	2 589	2 322	2 574	-	-	-	-	2 240
Irish Republic	2 836	5 097	4 924	-	-	-	-	-
Norway	1 099	1 949	175	-	-	-	-	-
Peru	14 576	12 968	11 828	10 122	2 208	200	1 142	-
U.S.A.	-	1 379	2 386	701	-	-	-	-
West Africa	4 327	455	-	526	-	-	-	-
Other Countries	736	383	245	2 883	308	111	170	1 991
Total ..	35 353	42 976	22 774	30 611	5 199	311	1 312	4 231
Bullion								
Australia	-	-	-	-	-	-	-	-
Total ..	158 592	124 418	114 067	126 659	8 617	-	13 951	11 690
Refined Lead								
Australia	47 723	53 433	38 931	30 251	167	-	5 341	6 252
Canada	40 980	42 569	45 423	45 262	3 084	627	9 046	3 467
S.W. Africa	7 684	9 556	5 916	9 099	1 097	499	300	149
Other Countries	558	200	370	2 500	257	10	-	179
Total ..	96 945	105 758	91 640	87 112	4 605	1 136	14 687	10 047
EXPORTS (including re-exports):								
Bullion								
Germany F.R.	39 728	41 462	22 050	30 201	1 258	511	3 094	1 650
Netherlands	-	-	-	796	-	-	-	-
Total ..	39 728	41 462	22 050	30 997	1 258	511	3 094	1 690
Refined Lead								
Belgium	3 259	3 645	2 940	2 034	-	-	-	1
China P.R.	26 335	4 595	5 027	9 023	-	2 001	7 002	-
Denmark	589	1 207	299	503	-	3	-	40
Egypt	403	401	323	2 251	500	540	-	-
France	6 121	5 983	7 376	9 606	750	83	1 303	117
Germany, D.R.	-	1 926	-	1 888	-	-	-	-
Germany, Federal Republic	12 560	9 595	10 085	10 557	31	504	200	889
Greece	2 006	5	1 100	775	-	-	-	-
India	359	9 892	8 486	3 115	-	-	-	-
Irish Republic	183	446	1 391	1 631	232	172	163	82
Israel	887	1 173	589	625	74	-	41	40
Italy	980	1 051	5	199	1	-	60	51
Netherlands	21 874	21 179	10 448	16 171	1 494	1 119	319	1 300
Norway	4 939	4 947	5 318	3 975	410	349	50	1 079
Pakistan	1 169	546	26	146	-	-	-	-
Poland	1 855	4 689	2 002	1 000	-	-	-	17
Portugal	3 032	3 659	4 827	4 861	282	52	667	851
Spain	901	-	-	2 089	-	-	-	-
Sweden	452	869	362	95	-	38	38	96
Switzerland	2 906	4 786	6 994	4 196	510	182	2 051	924
Turkey	3 143	5 496	3 333	3 515	-	149	597	-
U.S.A.	55	146	10 501	3	-	-	-	-
U.S.S.R.	1 011	-	-	5 022	-	-	-	-
Other Countries	2 591	2 965	13 387 ⁽¹⁾	3 275	606	266	137	202
Total ..	97 620	89 141	95 918	86 555	4 890	5 458	12 628	5 699
Lead Alloys								
Austria	397	162	359	1 390	146	156	61	-
Chile	772	-	2	-	-	-	-	-
Denmark	-	1 833	895	1 393	41	543	40	-
Egypt	-	95	304	1 486	-	-	1	-
Finland	797	146	321	450	9	90	74	90
Germany, Federal Republic	611	889	485	587	40	40	20	20
Greece	575	175	4 037	5 023	-	612	-	-
Iran	275	52	186	93	18	-	-	34
Iraq	149	89	177	98	7	-	4	-
Israel	682	1 658	1 621	2 176	111	170	80	197
Japan	-	11	436	302	-	-	-	-
Netherlands	1 882	3 218	4 535	1 497	60	-	20	21
Nigeria	326	1 098	820	698	106	115	98	7
Norway	698	1 744	1 387	2 252	-	42	61	169
Poland	-	-	613	320	-	-	-	40
Portugal	348	381	305	920	18	5	34	-
Sweden	833	1 229	1 629	2 489	209	160	179	260
Switzerland	-	345	1 691	1 808	-	470	-	-
U.S.A.	2 719	4 220	3 093	712	-	-	-	34
Other Countries	3 866	3 235	2 852	3 979	294	258	277	270
Total ..	14 330	20 590	25 798	27 583	1 059	2 661	669	1 052

Note (1) includes 3 285 tons Canada

LEAD

U.S.A.

METRIC TONS

	1970	1971	1972	1973	1973		1974	
					Nov	Dec	Jan	Feb
UNWROUGHT								
Production								
Ores and Concentrates:								
Content by analysis	540 300	546 700	584 000	567 700	46 000	50 200	54 500	50 300
Recoverable content	518 699	524 852	561 471	544 545	44 170	48 174	52 299	48 305
Primary Refined Soft Lead	604 848	589 685	631 092	674 102	57 359	51 295	52 712	53 565
Secondary Refined Soft Lead	125 999	111 573	136 207	119 721	8 732	9 150	9 890	11 697
Total	730 847	701 258	767 299	793 823	66 091	60 445	62 602	65 262
Primary Antimonial Lead ⁽¹⁾	10 573	14 620	8 891	12 365	1 039	1 837	564	815
Secondary Antimonial Lead ⁽¹⁾	316 026	310 904	313 779	315 449	26 279	24 019	26 102	27 680
Total Antimonial Lead	326 599	325 524	322 670	327 814	27 318	25 856	26 666	28 495
Remelted Lead	18 395	24 625	21 060	38 801	2 744	1 700	1 360	1 233
Imports								
Ores, Concentrates, Matte, etc. Total ..	101 973	59 872	92 092	92 969	7 341	10 366	7 215	7 503
of which from:								
Australia	26 635	8 069	18 709	19 711	1 356	3 975	3 674	286
Canada	37 500	19 854	27 522	16 386	1 958	1 516	1 432	394
Honduras	13 657	13 718	16 139	18 375	1 002	1 608	-	2 360
Peru	19 357	16 687	25 238	21 793	3 045	1 285	2 109	2 614
Other	4 824	1 544	4 394	16 704 ⁽⁴⁾	-	1 982	-	1 849
Bullion	269	37	812	25	4	-	-	-
Pigs and Bars Total ..	221 919	177 434	219 893	161 568	11 275	7 437	10 422	8 917
of which from:								
Australia	46 906	41 770	32 330	41 323	5 485	-	-	-
Canada	57 836	51 547	75 129	56 162	3 563	5 007	6 069	3 867
Mexico	34 807	26 894	32 216	18 497	764	61	-	1 430
Peru	47 603	32 996	44 688	38 803	1 452	2 358	4 353	3 582
South Africa	11 778	12 265	7 987	5 120	-	-	-	-
Yugoslavia	17 023	7 896	1 498	-	-	-	-	-
Other	5 966	4 066	26 045 ⁽⁵⁾	1 663	11	11	-	38
Reclaimed Scrap	6 221	3 069	2 935	1 803	340	33	37	113
Exports								
Refined Lead Total ..	4 151	2 376	4 657	45 212	5 487	3 600	-	-
of which to:								
Canada	782	300	259	109	-	6	-	-
Venezuela	320	-	272	148	57	-	-	-
Netherlands	-	-	860	5 306	520	7	-	-
Italy	-	-	2 905	5 225	3 211	100	-	-
Japan	-	546	17	20 824	389	626	-	-
Taiwan	77	1 000	-	153	150	-	-	-
Spain	1 625	-	-	32	-	-	-	-
India	699	-	-	-	-	-	-	-
Korea Rep	-	-	-	1 487	61	156	-	-
Other	648	530	344	11 928	1 099	2 705	-	-
Lead Alloy	613	1 050	1 334	4 929	2 180	459	-	-
Stocks of Refined Soft Lead at:								
Primary Refineries	82 432	42 422	55 186	21 122	17 782	21 122	17 428	18 155
Consumers and Secondary Smelters	75 136	74 329	63 986	72 355	74 128	72 365	69 058	72 751
Consumption of Refined Lead⁽²⁾	894 200	938 900	997 400	1 000 800	71 400	70 500		
MANUFACTURES								
Consumption of lead in the manufacture of the following lead products:								
Lead Sheet	19 096	25 045	21 470	18 434	1 697	1 536	1 433	
Lead Foil	5 009	4 007	4 166	4 522	319	337	423	
Lead Pipes, Traps and Bonds	16 227	16 487	16 130	16 547	1 320	601	808	
Producer's Shipments:								
Lead and Lead based Alloy	20 559	20 097	20 873	18 349	1 334	1 251		
Die Castings								
Imports								
Lead Rods, Bars, Sections and Wire	110	240	33					
Lead Plate, Sheet and Strip	354	214	146	12				
Lead Pipes, Tubing, Fittings and Blanks	135	25	48	22				
Lead Foil, Powders and Flakes	1 292	863	913	679	41			
Total	1 891	1 342	1 140	713⁽⁵⁾	41			
Exports (Lead and Lead Alloy)								
Foil, Powders and Flakes	456	521	361	504	37	42		
Other wrought products	2 655	1 435	1 249	12 850	464	2 736		

Notes (1) Lead Content
 (2) Excluding Secondary Antimonial and Remelted Pig Lead
 (3) Includes U.K. 10 688 tons and Switzerland 7 252 tons
 (4) Includes Japan 12 082 tons
 (5) January to November