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12 Noon, Tuesday, April 10, 1962

LEAD AND ZINC: A FERTILE FIELD FOR PROMOTION

Notes for a talk to be given by
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Opportunities for developing lead and zinc are two-fold:

1. By better exploitation in more highly developed areas e.g. parts of Europe, North America, Australia and Japan.
2. In the growing economies of the under-developed countries.

1. HIGHLY DEVELOPED AREAS

a) Per capita consumption. For both lead and zinc varies over a wide range. See table 1.

Main industrialized countries use 10-12 lb refined lead and refined zinc per head of population each year. U.K. and W. Germany biggest users of zinc; Sweden and U.K. largest in lead. The U.S.A. in 1960 was only sixth in order for zinc and seventh for lead. Belgium's 25-3/4 lb of zinc reflects important export trade in zinc products as well as high home consumption. Australia's 20-1/4 lb of zinc is outstanding, reflecting widespread use of galvanized sheet as a building material and galvanized wire for fencing.

b) End use consumption. Details of consumption (refined and secondary) given in tables 2 and 3. Reasons for differences partly economic, partly geographical, partly traditional, so not likely that uses in all these countries can become identical.

U.K. most impressive pattern for lead - large car population, cable industry plus traditional use of sheet and pipe in building and plumbing. Lead not so important as traditional building material in Germany and France - they use zinc. Sweden high because much lead used for cables. In U.S.A. major use for batteries followed by tetraethyl lead; sheet and pipe not much used for building despite present low prices. Situation similar in Australia.

For zinc, U.K. and Germany both use about a third more zinc for brass than for galvanizing; brass biggest use in Europe, followed by galvanizing. In Europe as a whole galvanizing different in detail from U.S.A. where strip galvanizing predominates. In France and Germany sheet zinc about 20-30% of total consumption because of traditional use for roofing. Die Casting relatively small in Europe except in U.K. but growing; takes less than 10% of total European

(Presented at the Joint Session of the American Zinc Institute and Lead Industries Association, St. Louis, Missouri, April 10, 1962)

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zinc contrasted with 40% in U.S.A. In these differences lies scope for development.

c) Prospects for increasing consumption. Best hope for lead lies in growth of car population so everything possible must be done to keep lead in batteries by raising their efficiency and lowering costs. But other uses could be developed; in building, by using new techniques; in sound attenuation; in radiation shielding; and in cable sheathing.

In zinc many uses capable of further development, e.g. die casting, galvanizing, new alloys. Die casting should grow with rise in living standards. Galvanizing depends on convincing steel users of value of long term protection. Brass faces competition from light alloys (which can now match its colour through anodizing) but brass a versatile alloy that could be expanded even in U.K. and Germany. Rolled zinc growing with increase in use of batteries for transistor radios, etc. but traditional building uses will need very active promotion even using new alloys.

Notice also the good prospects in countries with very small uses - Spain, Portugal, Greece, Italy. Their population adds up to 90,000,000 - 30% of W. Europe - great scope for increased demand for both metals. 2 lb/head extra per year would amount to 80,000 tons and even then consumption would still be far behind rest of Europe. The Common Market will help - national boundaries will vanish and patterns of consumption will tend to become more uniform over Europe as a whole.

2. HOW CAN USES BE DEVELOPED

- 1) by research to find new uses and improve existing ones.
- 2) by promoting present uses and spreading existing knowledge, technical and commercial.

Dr. Radtke will be talking about research. Nevertheless worth observing that research always chancey and even when successful, results take time to put into practice. Care in presenting results needed - premature publicity for research to improve existing uses may tend to over-emphasize their shortcomings. Value of research should not be underrated but zinc and lead need immediate increase in demand such as can only be achieved by promotional work.

3. PROMOTION

Should dispel any ideas that lead and zinc are out of date and aim at creating image of lead and zinc as modern progressive metals to be considered by engineers, architects and others whenever metals used. Properties of both well known and well understood. Both will probably be dependent on existing uses for many years yet so propaganda should aim mainly at fostering them.

a) Z.D.A. and L.D.A. organisation. The most comprehensive promotional work for lead and zinc in Europe is that conducted by the Zinc Development Association and the Lead Development Association of London. Both Associations

mainly financed by British Commonwealth and some U.S. producers but with important support from consumer industries.

Z.D.A. activities range far and wide. It has affiliated associations, run by Z.D.A. staff, on galvanizing, die casting and pigments. Through European Committees it plays important role in stimulating promotional and technical work on the continent.

So far, L.D.A. on smaller scale but now being stepped up. European Lead Development Committee recently formed to coordinate and expand development work in Europe. First International Conference on Lead - London 8-12th October 1962.

Both Associations have many technical and promotional committees in which users cooperate to improve techniques, to find new applications and to promote new and existing uses.

The Associations share offices and have combined staff of about 50 who provide an unrivalled technical information service on lead and zinc.

b) Z.D.A. and L.D.A. promotional work. Consider promotional work done by these organisations in 1961, bearing in mind that the aim is not only to provide information but also to foster an image of lead and zinc as modern, progressive metals with a future. All publications maintain high technical standards and all promotional work is based on surveys of market prospects.

4. EXAMPLES OF Z.D.A. AND L.D.A. PROMOTIONAL WORK

Nos. 1, 2, 3. Rolled Zinc

Important outlet in Europe, but traditional use - aim therefore to stress modern applications. Bulletin produced by European Zinc in Architecture Committee, about 75,000 copies printed in English, French, German, Italian, Spanish, Dutch and Flemish.

Nos. 4, 5, 6, 7, 8. Zinc Coatings

First pictures show galvanizing advertisements stressing value for rust prevention. Technical booklets cover many subjects. European bulletin Fe + Zn produced in English, French, German, Italian and Dutch editions. Conference programmes and preprints all designed to convey progressive spirit of the European committee. Note spectacular use of Fe + Zn, European slogan for hot galvanizing.

Nos. 9, 10, 11. Die Casting

Advertisements, technical publications and even the safety booklet all project thought that die casting is a modern production process. Both the U.K. Die Casting News and European bulletin, published in English, French, German and Italian, are aimed at influencing designers of consumer goods. Spectacular layouts essential here.

No. 12. Wall Charts and Lecture Notes

Specially prepared and printed for use in conjunction with carefully designed wall charts. Although nearly all used at technical schools, charts have also been widely displayed in die casting works. French and Italian versions have been prepared.

No. 13 Lithographic plate advertisements

Designed for printers journals, aimed at combating claims for other materials and stressing trade-in value of used zinc plates.

No. 14 Instructional Booklets

To help fabricators and users - another side of the publicity work. These are only a few examples of a large series.

Nos. 15, 16, 17, 18

Exhibition participation also necessary but stands must be as well designed and as modern as those for other materials.

No. 19

Both Associations issue comprehensive lists of publications to avoid wasteful distribution of more expensive items to general enquirers. Each contains a card for requesting copies. The abstract bulletins, issued by the expanded library service which now serves your organisations as well as ours, have important publicity value as well as providing a useful reference service. Loan request slips, letter headings, translation covers, etc. have all been prepared keeping in mind their promotional value. Press releases also designed for maximum impact.

No. 20

Lead building advertisements rather more traditional because modern examples hard to find.

No. 21

Lead News now completely redesigned to convey progressive thinking being given to lead in Europe.

Nos. 22, 23

Cable sheathing publications, part of an important series aimed at maintaining lead in this field in Europe - 30% of total European lead consumption. Note publicity value of report covers.

No. 24

More new lead booklets.

No. 25

Lead display at Building Exhibition was coordinated with zinc display shown earlier.

All these publications, advertisements and other material help to promote the image of lead and zinc as modern materials for engineers, architects and designers and students. Letter headings, memorandum forms and offices themselves can all serve to promote lead and zinc. Several companies now building modern offices have kept this in mind. ZDA/LDA offices in London, although in old building, give visitors an impression of efficiency and progress.

Two other aspects of promotional work are important. First editorial publicity - many of the publications shown were based on articles printed beforehand in the technical press. Z.D.A. and L.D.A. inspire many references and articles on zinc and lead. Secondly technical service - well qualified and enthusiastic staff are available to visit consumers and to stimulate their interest in zinc and lead. But too often these are regarded as a substitute for a fully integrated promotional campaign instead of being just parts of it.

So far spoken only about Z.D.A./L.D.A. work but many other lively associations on the continent doing similar work. They too are for promoting lead and zinc or for galvanizing, die casting or rolled zinc. All work together and often collaborate on publications for distribution in several languages. Some are shown on the display board.

c) Broader fields of promotion. Biggest gap in Z.D.A./L.D.A. work lack of newspaper and general magazine advertising for which funds insufficient. Our competitors spend vast sums in European and British daily and weekly papers. Quite wrong to dismiss this as consumer advertising. Their advertisements aimed at designer and manufacturer and constantly remind them of versatility and virtues of material.

While lead and zinc both have certain uses determined by individual properties - batteries, T.E.L. for lead, dry cells and die castings and castings for zinc - continued reminder of applications and properties in non-technical press would influence leaders of opinion. Even television should be considered but perhaps more suitable for products for direct sale to masses.

5. UNDER-DEVELOPED COUNTRIES

So far, only talked about the developed countries, but looking ahead it is elsewhere that our greatest future lies. The developed countries of Europe, N. America, Australia and Japan with a combined population of 630 million use per capita 7 lb. lead and 8 lb. zinc annually. The rest of the free world (Soviet bloc and China excepted) with a population of 1,215 million have a per capita consumption of 0.3 lb. lead and 0.4 lb. zinc. But there is no assurance that they will become lead and zinc consumers unless we take steps to educate them to understand and use our metals. First of all they will be influenced by the progress lead and zinc make in the developed countries - do not overlook the importance of the modern image on their thinking. New countries always want the latest rather than the traditional material and need to be provided with up-to-date technical information and assistance.

a) New Indian office. Take India as an example of the opportunities. Between 1950 and 1961 zinc consumption rose from 26,000 to 77,000 tons and lead from 15,000 to 31,000 tons a year. Both tonnages still small against population of 400,000,000. Our first aim must be to provide technical information to users and prospective users so we are setting up a lead-zinc technical information centre in India jointly financed by members of the L.D.A. and Z.D.A. including those in the U.S.A. Indian developments will set pattern which other emerging countries will follow.

Our competitors active in fostering markets in the emerging countries and have offices staffed by technical as well as sales people throughout Asia, Africa and South America - wherever foreign aid is available. We must do the same - no good waiting for them to begin using our metals; this may never happen without our help.

6. CONCLUSIONS

This morning I have talked mostly about promotion in Europe. Similar work is being done here and in other countries too - Australia is soon to have its own development Association. But taken together the total effort to promote lead and zinc is very small in scale and scope when compared with that of their main competitors, plastics and aluminum. They have gained much ground in recent years.

Nevertheless it should not be forgotten that lead and zinc have made steady progress. In 1961, despite no significant improvement in consumption in the U.S.A., the Free World consumption of refined lead increased by 60,000 m. tons (3%) and zinc by 135,000 m. tons (5-1/2%). On the other hand Free World consumption of aluminum rose by only 4% despite increased usage in the U.S.A. What does the future hold for lead and zinc - are the best years still to come? Yes, but only if we remember that the future depends on the present. Now is the time to embark on world wide promotion on an imaginative scale - it would bring lasting benefits to lead and zinc.

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TABLE I

1960 FREE WORLD CONSUMPTION OF REFINED LEAD AND ZINC

COUNTRY	Population	L E A D		Z I N C	
	in millions	1000 m. tons	Per capita in lbs.	1000 m. tons	Per Capita in lbs.
<u>NORTH AMERICA</u>					
U. S. A.	180	809	10	790	9-1/2
CANADA	18	36	4-1/2	51	6-1/4
<u>EUROPE</u>					
U.K.	52	287	12	276	11-3/4
W. GERMANY	53	240	10	297	12-1/4
FRANCE	46	165	8	172	8-1/4
ITALY	49	78	3-1/2	85	3-3/4
BELGIUM	9	46	10-3/4	105	25-3/4
NETHERLANDS	11	51	10-1/4	26	5-1/4
AUSTRIA	7	21	6-1/2	13	4
NORWAY	4	10	5-1/2	14	7-3/4
SWEDEN	7	44	13-3/4	31	9-3/4
DENMARK	4	21	11-1/2	12	6-1/2
SWITZERLAND	5	19	8-1/4	23	10
SPAIN	30	29	2	32	2-1/4
PORTUGAL	9	6	1-1/2	1	1/4
OTHERS	43	47	2-1/2	40	2
<u>TOTAL</u>	329	1063	7	1127	7-1/2
AUSTRALIA	10	49	10-3/4	92	20-1/4
JAPAN	93	95	2-1/4	189	4-1/2
TOTAL above countries	630	2052	7	2249	8
<u>TOTAL other Countries of Free World</u>					
	1215	158	0.3	193	0.4
of which India	408	25	0.1	62	0.3

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TABLE 2

CONSUMPTION OF ZINC (REFINED AND SECONDARY) IN EUROPE AND U.S.A. -- 1960

Reporting Country	1000 m. tons				
	Brass	Galvanizing	Die Casting	Rolled Zinc	Zinc Oxide
W. Germany	142	104	35	79	32**
France	55	71	22	67	33
Italy	44	42	9	8.6	9.6
Belgium & Luxembourg	N.A.	41	N.A.	N.A.	N.A.
Netherlands	1.7	8.4	N.A.	N.A.	N.A.
Austria	4.3	5.7	N.A.	1.1	1.6
Denmark	N.A.	N.A.	N.A.	N.A.	N.A.
Norway	N.A.	6	N.A.	N.A.	2**
Sweden	16*	5	N.A.	N.A.	4*
Switzerland	16	8.2	N.A.	N.A.	1.2**
United Kingdom	134	101	69.5	26	27
U.S.A.	88	330	294	35	14

N.A. -- Not Available

* -- Estimated

** -- Includes lithopone and miscellaneous salts.

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TABLE 3

CONSUMPTION OF LEAD (REFINED AND SECONDARY) IN EUROPE AND U.S.A. -- 1960

1000 m. tons

Reporting Countries	Cable Sheathing	Batteries	Semi-finished products (sheet pipe shot etc.)	Alloys (solders bearing & type metal etc.)	Pigments (oxides white lead etc.)	Tetraethyl lead
W. Germany	84	73	52	23	38	0
Belgium	16	6.5	26	N.A.	1.4	0
Netherlands	N.A.	N.A.	16	N.A.	N.A.	0
France	61	45	49	17	12	6.1
Italy	28	26	36	6	10	4.8
Austria	5	7.5	3.9	2.1	1.9	0.3
Denmark	N.A.	N.A.	N.A.	N.A.	N.A.	0
Norway	6.4	1.9	0.4	0.6	0.1	0
Sweden	25	9	1	N.A.	2.3	0
Switzerland	10	3.8	1.9	0.1	1.9	0
Spain	20	6.5	23	2.5	3.3	0
United Kingdom	97	76	86	38	36	27
U.S.A.	54	315	94	112	91	149

N.A. -- Not Available