

LEAD INDUSTRIES ASSOCIATION

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NEW YORK 17, N. Y.

March 4, 1958

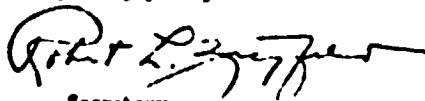
SUBJECT: REPRINT ON LEAD

To Members of the Lead Industries Association:

Enclosed please find a reprint of the article on lead from the annual review issue of "Engineering and Mining Journal," February, 1958.

Extra copies are available as long as our supply lasts.

Very truly yours,



Secretary.



Lead



R. L. Diefeld
Secretary
Lead Industries Association

MAJOR METALS

"... Figures indicate domestic lead mine output down some 6% to 5,000 tpm from first half of 1957."

CONTINUED WOULD OVERSUPPLY COMBINED with a moderate decline in consumption, put enough pressure on the domestic lead market to break the price during 1957 from 16¢ per lb New York to 13¢, despite continued substantial Government stockpile purchases. The lower price brought about some production curtailment late in the year. However, U.S. imports increased substantially and the domestic lead mining industry appealed for higher tariffs. The London Metal Exchange price fell below parity with New York even allowing for the maximum tariff increase which may be imposed. Restrictions placed on the barrier program reduced the amount of foreign lead bought for stockpile under this program as the year progressed, but purchases of domestic lead for stockpile continued.

Stockpiling. The U. S. Government continued its policy of the last few years of buying domestically produced lead for the stockpile. Such purchases averaged about 7,000 tpm throughout 1957. Also, late in 1956 it made substantial exchanges of surplus agricultural commodities for foreign lead for the stockpile and this continued into the first few months of 1957. At that time stringent restrictions were placed on the barrier program which all but put a stop to the acquisition of lead through barrier and this method of removing surplus lead from the market.

It is estimated that some 150,000 tons were added to stockpile altogether in 1957, bringing the total in stockpile to substantially more than consumption in the U.S. in any past year, peace or war.

On the other hand the British government announced that it would dispose of 20,000 tons of lead from its stockpile. This naturally had a depressing effect on the market since the announcement came in October when the market was weak anyway. Originally it announced that it would dispose of 3,000 tpm starting with December but this was later changed to 1,200 tpm for the first six months of 1958, or 7,200 tons in the six-month period.

Price. With the support of stockpile purchases the New York price of

lead remained remarkably stable at 16¢ per lb from Jan. 13, 1956 to May 9, 1957.

May 9, 1957	15 50
May 17, 1957	15 00
June 11, 1957	14 00
Oct. 14, 1957	13 50
Dec. 2, 1957	13.00

Production of lead from U.S. mines was lower than 1946 by about 5%, most of this curtailment taking place in the last quarter of the year. There can be little doubt but that curtailment was postponed, both here and abroad, by the Government stockpiling policies. Secondary production also was slightly lower by about 3- or 4%.

Imports of ore and concentrates were up moderately by about 5% but imports of metal increased substantially by about 16%. Total imports therefore were up about 11%, and accounted for nearly 40% of the total U.S. lead supply in 1957.

Thus total supplies of lead in the U. S. last year were slightly higher than in 1956. An increase during the year of some 25,000 tons in producer's stocks made the net available for consumption and stockpiling almost identical with the year before.

Consumption by industry showed a decline of about 6% to around 1,135,000 tons, of which about 5,000 tons was taken care of by a reduction of manufacturers' and secondary smelters' stocks. With supplies at 1,310,000 tons, this left about 180,000 tons for stockpiling and unaccounted for.

Tariffs. For several years the Administration in Washington has been working on a long-term minerals program which was presented to Congress in 1957. Among the recommendations presented was one for a sliding scale tariff or excise tax on lead, the tax to increase by steps as the price declined and to be eliminated entirely when the price was above a certain level. Bills to that effect were introduced in both houses of Congress, but after Committee hearings, no action was taken. Administration was informed by Congress that it already had the power to increase tariffs through the escape clause provisions

of the Reciprocal Trade Agreements Act.

As a result the domestic lead and zinc mining industry, through the Emergency Lead-Zinc Committee, appealed to the Tariff Commission for relief. Hearings were held in November and various witnesses asked for greater tariff protection, import quotas or both, while others, particularly foreign producers, opposed any changes. As the year closed the report of the Tariff Commission to the President was awaited.

Under the escape clause provisions, the tariff on lead ores and concentrates could be increased from 4¢ per lb of lead content to a maximum of 1.8¢ per lb, and on lead metal from 1 1/4¢ per lb to a maximum of 2.55¢. Meanwhile the lead price on the London Metal Exchange discounted the possible tariff increases and fell well below parity with the domestic market, even allowing for the maximum possible tariff increase. It recovered somewhat from its low before the year end.

Uses. Of the three major uses of lead, only storage batteries gave a reasonably good account, and even these were somewhat disappointing in that consumption in batteries increased no more than about 1%. Apparently technological advances which permit the manufacture of batteries with longer lives but with less lead per battery are having their effect.

On the other hand, tetraethyl lead used 10% less lead than in 1956 which was its peak year. The drop of about 19,000 tons to 173,000 tons in 1957 is probably attributable to two factors: a decline in total gasoline consumption, and the coming on-stream of a number of new catalytic cracking plants, started a couple of years ago, which provided a greater pool of high quality stock requiring less TEL per gallon.

The third major use, cable sheathing, showed even a larger percentage decline of nearly 15%, dropping to about 115,000 tons. The 1957 usage was disappointing and probably reflects catching up on the back-log of power and telephone cable requirements, a shortage of which has per-

Reprinted from ENGINEERING AND MINING JOURNAL February 1958

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Supply and Demand in the U.S.¹

(Short tons)		
	1957 estimated	1956
Supply:		
Mine production	335,000	352,876
Secondary production	690,000	906,500
Imports:		
Org. matts, etc.	304,000	196,152
Pigs and bars	304,000	262,654
	1,335,000	1,318,172
Change in stocks of primary smelters refiners	20,000 ^a	8,612 ^a
Total available	1,355,000	1,326,784
Demand:		
Industrial consumption	1,135,000	1,209,717
Consumers and secondary smelters		
stocks	8,000 ^a	7,949 ^a
	1,143,000	1,217,666
For stockpile and unaccounted for	190,000	109,118

¹American Bureau of Metal Statistics,
U. S. Bureau of Mines and Lead Indus-
tries Association. ^aDevinco, Macrom.

Monthly Average Lead Prices—N.Y.

(Cents per lb)		
	1957	1956
January	16.000	16.151
February	16.000	16.000
March	16.000	16.000
April	16.000	16.000
May	15.365	16.000
June	14.330	16.000
July	14.000	16.000
August	14.000	16.000
September	14.000	16.000
October	13.692	16.000
November	13.560	16.000
December	13.000	16.000

Lead Use in the U.S.²

(Short tons)		
	1957 estimated	1956
White Lead	17,000	16,951
Red lead and litharge	76,000	79,199
Storage batteries	275,000	370,771
Cable	115,000	134,119
Building	81,000	58,277
Tetraethyl lead	173,000	191,900
Ammonitions	42,000	44,418
Fuel	8,000	4,593
Refracting metal	26,000	28,121
Solder	72,000	75,290
Type metal	26,000	26,709
Casting lead	65,000	64,970
Other uses	92,000	111,869
	1,135,000	1,209,717

²Based on U. S. Bureau of Mine statistics.

noted since the war.

Because of the decline in home building, it is natural to expect that the use of lead for this purpose would be adversely affected. The figure for building, which includes chemical construction as well, was down to 51,000 tons, a decline of 12%. However, casting lead held steady at around 65,000 tons.

All the other uses of lead either held their own or showed only moderate declines, with the exception of miscellaneous or unclassified uses. The latter was down about 18%, to 92,000 tons.

In general, the lead consumption picture as presented in 1957 would not be too disturbing were it not for the continued overproduction throughout the world. No new major threat to established uses of lead prevented itself. Consumption either followed the general business trend or special conditions, in some instances, which are not likely to be permanent.

Outlook. For the immediate future, that is the year 1958, there appear to be no special features which would lead us to believe that consumption will do anything but follow the pattern of business in general. Most manufacturers' inventories are comparatively low and any improvement in their business would have to be reflected rather quickly in increased buying. It may be expected that the sustained advance in the use of lead for tetraethyl lead, which started in 1953 and which felt no appreciable setback until 1957, will again be resumed in the future. However, because of the conditions which caused this setback, improvement is not likely to be felt for another 6 to 12 months.

Furthermore, it is also unlikely that the technological improvements in batteries, which have kept pace with the growth in automobile registrations in the last few years, can continue at that rate. In other words, barring the development of an entirely new type of battery for automotive use, which is not indicated, it seems highly improbable that the amount of lead per battery can continue to be reduced indefinitely while the life of the battery is increased indefinitely.

A moderate up-turn in home building, which is already indicated, would be beneficial to lead but would be balanced by any curtailment of industrial investment in new plants. The huge Federal-aided road building program should be reflected in substantially increased demand for red lead paints for steel highway structures, since state highway specifications preponderantly favor this type of paint. New developments in the ceramic industries, such as porcelain

enamelled aluminium, low firing porcelain enamel for steel, the use of lead in electronic and other ceramic bodies and other applications, all point to steadily increased use of lead in ceramics but they cannot be expected to develop rapidly.

On the other hand, lead production should be substantially lower in 1958 due to the depressed price. Recent figures indicate that domestic mine production will be some 4,000 or 5,000 tons a month lower than in the first half of 1957. Foreign production will probably also be at a lower rate.

There are a number of other factors that will affect the 1958 lead market. For example, how long and at what rate will the Government buy lead for stockpile? What will the Tariff Commission recommendations be and will they be accepted by the president?

For the longer future there are definitely a number of optimistic signs, not the least of which is the determination of the industry to make a virtue of its capacity to produce at a higher rate. This not only is an incentive to find new uses or expand present uses but is an assurance that there will be enough lead to take care of them. A few years ago lead consumers were frightened by shortages and tried to find substitutes for lead. Now they can be encouraged to use lead freely in ways they have never used before.

With this outlook the lead industry is embarking on the largest and most intensive research and market development program in its history. The possibilities in ceramics and highway construction have been mentioned. It is also engaged in a study of the development of new products for the building construction field. A complete survey of research possibilities in every area has just been completed by the industry.

That lead is adaptable to modern technology is found in a number of new developments, none of which are necessarily important today but which indicate that any day a new large use or many smaller ones may become commercially important. For instance, the Navy developed a tiny lead-silver rechargeable dry-cell battery for use in electronic equipment. Infrared sensitive lead sulphide is used in the guiding mechanism of the Army's Nike missile. Lead compounds can be used as modifiers in rocket fuels. Lead is almost essential as shielding against gamma rays in mobile nuclear units. Lead stabilizers are important in vinyl plastics. Powdered lead in combination with polyethylene, paraffin and other binders is finding new commercial applications. White lead has been found to almost double the emissivity of copper.

Printed in U.S.A.