

RAW MATERIAL FORUM

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LEAD PRODUCTS

By FELIX EDGAR WORMSER

Secretary, Lead Industries Association

Although the topic assigned to me is LEAD PRODUCTS used by the paint industry, such as white lead, red lead, basic lead sulphate and other lead pigments, I intend to speak almost entirely on the pig lead situation because it is the root of your current inability to procure all the lead pigments you might like to utilize.

The pig lead shortage today is an excellent illustration of what Government controls on prices, profits production, distribution and imports can do when they supplant the operations of a free market in a commodity of international importance. The elements in the lead situation are easy to grasp. In the first place, lead has wide application in industry and is so extraordinarily useful that in times of great business activity, as today, the demand for it is exceptionally strong. For example, the automotive industry needs large quantities of lead for the construction and continued operation of automobiles, in storage batteries, solder, bearing metals, brake linings, and in the very gasoline which propels them. The building industry, as you well know, requires large amounts of lead in the form of paint, both white lead and red lead, in plumbing, and in sheet lead wherever sulphuric acid is used. The public utility industry consumes large quantities in cable sheathings for telephone toll and power lines.

Even the food industry in the United States needs large tonnages of lead, both as the insecticide—lead arsenate—for spraying fruit trees, and as ammunition for the farmer to supplement his food supply and to cut down depredations by predatory animals. There are a number of other important uses, too detailed to mention here. In the aggregate I estimate that, if it were available, industry could consume today, in the United States alone, between 1,000,000 and 1,250,000 tons of lead per year. This continued the wartime trend which set a mark of well over 1,000,000 tons per year for a period of six years, from 1940 to 1945 inclusive.

To satisfy such a huge demand for the metal there are four sources of supply open:

1. Domestic mine production,
2. Domestic scrap or secondary lead recovery,
3. Imports, and
4. Government Stocks, or private stocks.

The fourth source we can dismiss at once, as the Government stockpile is only around 30,000 tons and I do not think the military authorities will look with much favor to an impairment of that modest supply.

Let us analyse the situation in each one of the other available sources of supply as shown on the table following:

U. S. LEAD SUPPLIES (1937-1946) (In Short Tons)

	U. S. Mine Production of Lead	Secondary Lead Production	Imports (Lead Content)	Total Supply
1937	456,000	275,000	41,000	781,000
1938	370,000	225,000	64,000	659,000
1939	414,000	242,000	87,000	742,000
1940	457,000	260,000	282,000	1,000,000
1941	461,000	397,000	381,000	1,240,000
1942	496,000	323,000	492,000	1,312,000
1943	453,000	342,000	319,000	1,115,000
1944	417,000	331,000	321,000	1,070,000
1945	388,000	363,000	300,000	1,051,000
1946 (Estimated)	350,000	300,000	125,000	775,000

1. *Domestic Mine Production*—By dint of extraordinary effort and the sacrifice of their ore reserve position, many lead mines were able to keep production keyed up to a relatively high pitch during the war and succeeded in producing close to 500,000 tons in 1942. Thereafter, however, owing to progressively serious labor shortages, production declined until this year only about 350,000 tons of lead are expected to be produced. Only about two-thirds the labor necessary for capacity production is now working in the mines, and it is doubtful whether the lead mines may expect much relief so long as we have "full employment" in the United States.

In addition, lead mines have been operating under a subsidy system whereby most mines have been paid a bonus above the ceiling price of 8.25c per lb. The bonus may range from 1c up to 7.50c so that the top price received by some mines is 15.75c, but the bonus is only paid on production above a quota determination of the Government for each individual mine. Some American lead mining companies, however, are not receiving one cent in subsidy but are compelled to sell their lead at 8.25c while the Government at the same time is purchasing lead from Mexico and other countries at 10.25c, selling it at 8.25c in this country and absorbing the loss, a discrimination against some of the citizens of our country in favor of the nationals of another.

Moreover, the mine quota is subject to change at one month's notice, so that after it has been set, and if a mine should redouble its efforts to increase its profits, the quota would be readjusted speedily. This is not a system calculated to produce the utmost from American lead resources.

2. *Domestic Scrap or Secondary Lead Recovery*—Now let us turn to secondary or scrap lead production. This is an extremely important source of lead and generally accounts for a fairly steady annual tonnage of between 300,000 and 350,000 tons of lead per year. Please note that this tonnage corresponds closely to the tonnage extracted from the lead mines themselves.

A most interesting situation developed during the OPA "holiday" which has partly dried up this source of lead. During the OPA "holiday" an open market prevailed and the price of lead rose to 9.50c, but when the OPA was restored to life, it rolled back the price to 8.25c, with the immediate result that scrap dealers had no desire to sell their accumulations to the

smelters and refiners at the ceiling price, knowing full well that the OPA statutes would expire on June 30, 1947, and that the price of 8.25c was far below the world market. As a matter of fact, the world market is around 10.25c today. In other words, the scrap dealer was taking a very small gamble indeed in sitting on his lead rather than to dispose of it at a sacrifice price. In addition, some ores and concentrates and scrap, which were bought at 9.50c by the smelters during the OPA "holiday" are frozen today as the purchasers naturally do not wish to sell this material at a loss, at 8.25c. So much for the scrap situation.

3. *Imports*—Now let us look at the third source, namely, imports. A great change has taken place in the lead economy of the United States. Before the war lead production and consumption were in balance and imports were of minor significance. During the war, however, American industry demonstrated its capacity to consume such large amounts of lead that the United States mines, plus the scrap, were no longer able to supply the demand, so large tonnages of lead in both merchantable pig form and in ores and concentrates were imported. In 1942 close to 500,000 tons were imported in that fashion and for six years 1940 to 1945, imports averaged 349,200 tons per year.

Here, again, however, an important Government control stepped in, a control that is largely responsible for the partial paralysis existing in lead consuming industries. The Government became the sole importer, during the war. Private imports were forbidden. Recently it was revealed that the Government has some sort of an informal understanding with England to limit its imports into the United States, on what basis has never been disclosed. Hence, the imports of lead coming into the United States in 1946 will total only 125,000 tons and this despite the fact that lead is available in Mexico, Canada, Australia, Peru and elsewhere if American companies were permitted to buy it. Several companies, desperately needing lead for the conduct of their operations, have appeared in Washington and requested permission to purchase lead from Mexico, or other countries, at admittedly higher prices than the domestic ceiling price, but expressing a willingness to observe domestic ceilings on resale here. Their pleas have been uniformly denied. The power of the Government to continue import restrictions expires on March 31, 1947, under the Second War Powers Act, and I hope it will not be renewed.

In view of the facts in the lead situation as I have given them above, I suggest a simple remedy, i.e., that the Government decontrol lead and lead products. They are all negligible items in the cost of living of the American people but of tremendous significance in our industrial economy. A free market would then be restored and enable users of lead to bid for the metal internationally as well as nationally. It seems odd to me that meat, dairy products, and other commodities of vast importance in the daily cost of living should be decontrolled whereas lead must continue under strict controls.

If we are not to have decontrol, the Government might at least advance the ceiling price to the world market price so as to unlock the present frozen stocks of ores, concentrates and scrap and to encourage the steady and free movement of scrap to smelters.

If this isn't done, then more lead should be imported into the United States by the Government and the premium price system modified so as to introduce incentives rather than restrictions on production. Until Government controls on lead are terminated the lead shortage will be with us.

From a long range point of view, let me reassure my listeners that the lead shortage is something I consider purely transient. Higher postwar prices of lead will, I am confident, so stimulate prospecting and exploration throughout the world that new sources of production will be discovered, as in the past, and existing sources intensively exploited.

In this connection, considering the Bureau of Labor Standards commodity price index, lead is not expensive currently. In fact, 11c is the price at which it should sell in relation to other commodities today, if the index is used as a standard. The ceiling is 8.25c.

Higher postwar prices will no doubt cause lead to lose some existing markets to substitutes but it is a contingency that must be borne under our competitive free market system while the period of necessary readjustment occurs.

What all of this will mean to the future of lead in the paint industry is a matter largely of conjecture. I do feel, however, that as the paint industry is only one of numerous important lead consuming businesses, paint makers should press the Government for a supply of the raw material as long as Government controls remain, just as other lead consuming industries are doing. Some lead pigments were understandably sacrificed during the war so that more batteries, ammunition and other war products could be made, but that situation no longer exists. It is, therefore, I believe, a sound policy for the paint industry to protect its interests in demanding a fair peacetime share of the available domestic and foreign supply, or it may be lost in the scramble.

CONTAINERS

By W. C. STOLK

American Can Company

As usual, there are many ifs, ands and buts in the picture that are entirely beyond the control of the can manufacturing industry. Nevertheless, I think that now, and for the first time since the beginning of the war, the available information looks hopeless.

To fully understand the situation for the immediate future, I think it is necessary to look back for a moment over the year 1946. I should like to do this for two reasons:

First, your industry, as you know, is one of the large consumers of metal containers. In my opinion you are entitled to all of the pertinent facts at our disposal.

Second, I feel the can industry, despite many difficulties this year, has done an outstanding job on an overall basis. While I would doubt there is a member of your industry who could not have filled and sold more cans than he has received this year, it is only fair to say the paint industry ranks

estimated needs. Predictions are that, given the opportunity for continuous production, there will be enough steel. The big question-mark is whether there will be industrial peace, and one of us, I believe, is as good a judge as another as to that development.

I feel sure the can manufacturers will see that you are in possession of all the facts at their disposal and regret that the only guarantee I can offer at this time is the industry's desire to serve you to the best of its ability.

THE SUPPLY OUTLOOK FOR TITANIUM IN 1947

By D. W. ROBERTSON,

Vice President, Titanium Pigment Corporation

At the request of Mr. Trigg, your President, Mr. Weismuller, Assistant General Manager of the Pigments Department of E. I. duPont de Nemours & Company and I have undertaken to obtain available information from all of the producers and forecast the prospects for an increased supply of titanium pigments during the year 1947, and make a guess with respect to the adequacy of this supply in relation to demand. This statement, therefore, represents a joint opinion, from which any difference in views have been eliminated and is derived from information supplied by all producers.

First it should be recognized by everyone that as much titanium pigment is being supplied the paint industry now as in any pre-war year. In other words, there is no shortage based upon pre-war standards and unlike many other commodities which are being produced in smaller quantities, the output of titanium, at this moment, is as high as at any previous time.

Ore is not involved in the immediate outlook for titanium, that is, one to two years, although other raw materials may be a serious problem. The definitely limiting factor is plant capacity and it is not expected that capacity will be adequate to meet demand in 1947.

It is believed that the reasons for this lack of capacity can be made quite obvious. In the first place, titanium manufacture is a very complex operation which requires equipment from a large cross section of the country's industrial fabricating facilities, which means that plant construction requires considerable time under the most favorable conditions, and under present circumstances, may be extended by strikes or other production stoppages and delays in the plants and mines of literally hundreds of different fabricating and material sources of supply. Under existing conditions, therefore, the time required for additions to capacity may range from one and a half to a possible three years, depending upon the size of units involved and the conditions which exist through the period of construction. For example, at this moment, the best estimate for delivery time on some equipment is eighteen months and this pre-supposes no delay due to strikes or other interference with production.

In addition to the time factor, the same complexity of pigment plant requirements is directly reflected in capital investment per unit of production. Titanium dioxide probably requires a larger capital investment per unit of production than any other basic raw material entering into the paint

industry. It is quite obvious that this combination of time for plant construction and the extremely high capital cost tend to restrict rapid expansion and perhaps properly so. For example, over expansion, followed by a decline in demand for pigment, with consequent idle capacity might easily increase the cost of titanium dioxide by a substantial percentage.

Another important factor in the present situation is the very rapid rate of growth in the use of titanium. Titanium is a comparatively new commodity which had not reached a static condition in use when war interrupted expansion. The consequence was that pressures were built up to expansion, in the face of a Governmental halt to expansion of facilities. Actually, present requirements are that the war accelerated demand be met immediately by a comparable increase in supply. While this is not possible, the past record of the manufacturers of titanium pigments appears to warrant confidence in their effective application to the problem. For example, in the ten year period 1932 through 1941, the time of our entry into war, the production of titanium pigments was increased ten fold.

The foregoing is presented as a brief contribution to a background of facts and a better understanding of the actual situation which exists and which is beyond the control of the producers. It is not offered as an excuse or alibi, for the good reason that production would have been much greater today than is the case, if Government restrictions had not prevented the installation of more adequate facilities which the industry was ready and willing to undertake over the past three or four years. Individual producers exerted every effort to get this restriction relaxed, especially during the last year of the war when the present situation was clearly foreseen and the importance of some preparation for post-war demand was recognized. In this effort, Mr. Trigg and the Association lent their full support.

One other point should be made clear. The paint industry has always been the largest consumer of titanium pigments, taking about 70% of the total production. This percentage has remained substantially unchanged during the past several years except for a slight increase during the war, when the rubber industry was not taking its quota. You can, therefore, be assured that no other class of consumer is profiting by a more adequate supply at your expense. We see no reason for believing that this condition will change during the coming year.

Based upon projects under way and sufficiently well advanced as to be reasonably certain of completion during 1947, it is expected that there will be an addition of about 25% to the present plant capacity before the end of next year and that this increase will be distributed in increments from about January to the end of the year. All calculations are on the basis of the titanium dioxide content of both prime and composite pigments.

cause of the fishermen's strike during the first month of the season. Regardless of the reason, there won't be enough Sardine oil to begin to meet requirements until next season—if then. Recognizing this fact, fish reduction plants advanced their price ideas to 25c per pound for crude oil f.o.b. their plants as soon as the oil was decontrolled October 29th. This compares with the O.P.A. ceiling of 8.9c per pound.

The result is, of course, that the oil will go to the use where it will command the best price. This may, and probably will, eliminate the use of the oil in animal feeds and some other less important uses. On the other hand, it will increase the demand of core oil manufacturers for Linseed oil so there can be little doubt that this disastrous fish oil season will be felt by the drying oil industry.

Before closing I would like to say just a word about Perilla oil. No imports of either seed or oil have been received for over four years and prospects for immediately resuming shipments are not good. The principal Japanese merchants and crushers who dominated this market have all been put out of business and we are informed by the State Department that their properties are now held by Chinese government for subsequent disposition. However, the Chinese Nationalist authorities have not yet put in an appearance at Darien so that the port is still a dead city according to the report of our consulate there. However, both seed and oil are being produced, last year's crop being about 38,000 tons, and it is probable that in 1947 we shall once more be receiving imports of this long absent drying oil.

ZINC OXIDE PRODUCTS

By RAPH M. NEUMANN,
New Jersey Zinc Company

I have been answering questions all week, and probably many of you in the room have heard what I am going to say at the present time.

The situation with regard to zinc oxide and zinc sulfide pigments is the subject of this talk. I have given the matter a lot of thought as to what to say to you. The situation is very confusing. The paint industry is a large consumer of all these pigments and there are other industries that are large consumers of all these pigments, but summing up the situation, as far as we can see at the present time, and as far as it can be prophesied for 1947, we must say that the supply of all of these products, including lithopone, which primarily is a zinc pigment, will be limited to the current production, and the demand from all industries, as far as we can learn, will undoubtedly be greater than the supply at least for the first six months of 1947.

The producers of zinc oxide and all of the zinc sulphur pigments will probably go into the new year with practically no stocks on hand, and probably the consumers will have very limited stocks.

There will probably be no increase in the current production, so that all of these pigments, at least for the first six months of 1947, will necessarily have to be distributed to the various consuming industries on some kind of quota basis.

I have said this to many of you all through the week, and up to the present minute there is no change in that picture.

SYNTHETIC RESINS

By CHARLES J. O'CONNOR
President, Reichhold Chemicals, Inc.

You have invited me down here to give a report on the state of the synthetic resin industry. It is to be ten minutes of report and five minutes of questions and answers. I accepted and I am sticking my neck out a mile—I know it—so here goes!

There was a time when a man could be a successful manufacturer without knowing too much about his raw materials. If the raw material suited the production department and the price was attractive, he merely had to make a telephone call and, presto! his supplies were available. But times have changed—and how they have changed!

For example, a manufacturer friend of mine told me the other day that he had made a big change in his organization to meet the change in today's conditions. He said he had taken all his salesmen, his "extroverts," as he called them, and put them in his purchasing department and he had taken all his purchasing agents, his "introverts," and put them out calling on the trade. He did this so that he would have his "yes" men in the office being nice to the people who had anything to offer him, and his "no" men out in the field being tough with his customers. He said it was working, too!

But, seriously, today's successful resin manufacturer must do a lot more things than just manufacture. He must trace all of his raw materials right down to their origin. He must learn all about the total available manufacturing capacity in the country. He must find out how much of the material can be imported, how much of the various raw materials will be available next year, and who are the other claimants for these materials.

Today in the synthetic resin industry, we are confronted with many shortages, the most serious shortage being that of alkylid resins. And the reason why it is the most serious is because it not only affects our industry but it affects our whole industrial economy. Without alkylid resins or nitrocellulose, mass production would be impossible, and a shortage in these materials is bound to create a shortage in many other manufactured products. Now, let's see why this shortage exists.

An alkylid resin is made from phthalic anhydride, glycerine and oil. With one exception, phthalic anhydride is made from naphthalene, which is a product of the coke ovens. Therefore, a steel strike reflects itself all the way down to industrial finishes. Many people don't seem to realize this.

Another reason why there has been a critical shortage of phthalic anhydride is because many of the phthalic plants were badly in need of repairs because of being worked at peak capacity all during the war. Another contributing cause is that a good percentage of the naphthalene has been going into moth balls in recent months, rather than into phthalic anhydride, because there is more profit when naphthalene is sold as moth balls. It may interest you to know that our company recently bought approximately a million pounds of moth balls and converted them back into phthalic anhydride at considerable increase in cost. We did this in order to keep our plant running and, in turn, keep industry going. In Detroit, the greatest sin you