

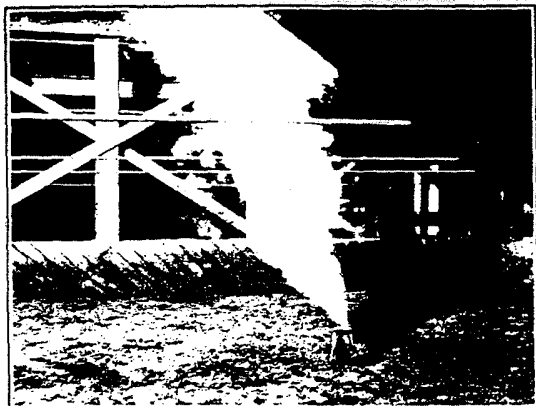
THE CHAMELEON



May
1927

The Call of Adventure

A TRIP THROUGH THE



White Lead Stack Steaming Under Full Load.

The habit of taking the familiar commodities for granted, which we use more or less every day, deprives us of many a most interesting experience. The weeds of the field, despised because they are weeds, are most fascinating to a botanist. The growing of wheat and the making of flour is a most engrossing study, but because flour is so common we overlook its interesting history. White Lead is another such neglected commodity which rewards an investigator most richly.

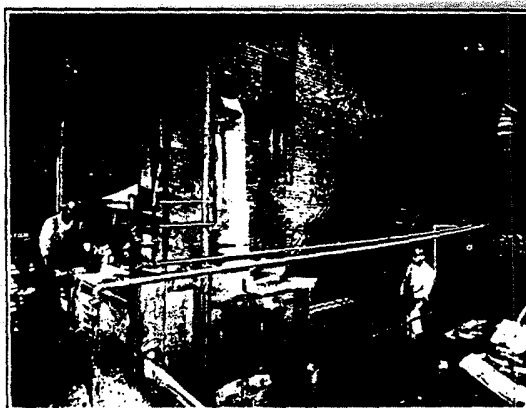


*W. S. Stevens
General Supt. Pigment
Products Mfg.*

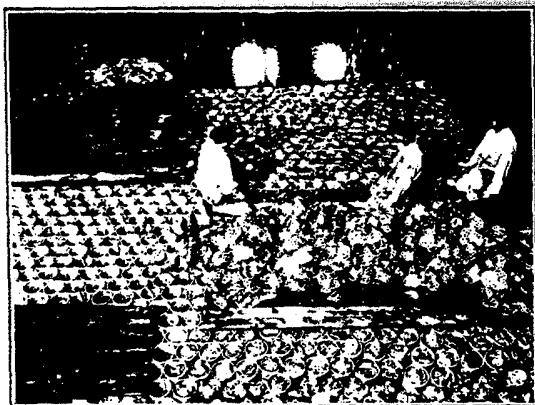
Sherwin-Williams are one of the very large makers of White Lead in the country. The amount of White Lead used in making SWP and our other prepared paints would make a most impressive volume even if we didn't sell a pound of our famous ODP White Lead. Its manufacture begins back in our mines at Magdalena, New Mexico. These mines produce a very wide variety of ores. There are veins which yield silver ores, others which are rich in copper, still other veins are richer in zinc or in lead and some which give us lead and zinc combined. We will go into this more fully in a later issue on our mines.

The pictures on these pages tell a fairly complete story of certain parts of the process of making ODP White Lead. Much is missing, however, which is highly important.

Up a flight of stairs, over a jack knife bridge, through a tin door and you stop in the twilight of the stack house of the White Lead plant. You are on a balcony which holds you suspended over a seemingly endless void. As your eyes become accustomed to the dim light you discern mountains of tan bark extending down through the center of a great barnlike wooden structure with high stalls flanking either side. A tangy smell cuts into the consciousness of your nostrils and you wonder whether you like it or not. A dampness pervades and a man is cutting fanciful curves through the air with a large hose. You are in as different a world from Doc Van Stone's Lacquer Plant at the other end of the lot as a little Dutch village would be in contrast to 42nd and Broadway, New York. Call it primitive, basic, fundamental or whatever you wish, the making of Old Dutch Process White Lead goes back to the shadowy beginnings of paint making with a process which persists until today, a process requiring the purest of corrodors, lead, handfilling and loading of stacks and Nature's own sweet time of changing metallic lead buckles into white lead carbonate 90 to 120 days.



Lead is received at the White Lead plant in the form of pigs or bars which weigh 100 pounds apiece. They are fed into the furnace at the left and emerge in liquid form which pours into moulds on the traveling belt, goes up over the ladder, by which time the molten metal is cooled and falls in a pretzel-like disc in the heap at the right. It is these discs, called buckles, which are shown filling the corrodors below.



Loading in the metal buckles.

The lead buckles now prepare to say farewell to their metallic form. At the bottom of these pots is dilute acetic acid in a small well. The acid does not touch the buckle until vaporized by the heat of the fermenting tan bark. There are thirteen layers of pots in a stack. Each tier is covered with a double sheathing of boards and is tucked away under a blanket of tan bark a foot and half thick. A wooden vent permits the generated steam to escape as it works its way up through the stack. The heat at the mouth of the vent would burn the hand.



Tan bark and boards removed to show corroded lead.

WHITE LEAD PLANT---CHICAGO

When the corroded lead buckles are taken from the stack they are crushed and mixed with water. Then the long process of washing, screening and purifying begins. The lead must first pass through a silk screen which carries 200 threads to the inch. It would seem that so fine a screen as this would remove everything that was removable and it does. There are no particles of tan bark, uncorroded lead or foreign substance which get by the screen, which is on a vibrating table and fairly gives one the shivers to watch it, and yet from the screen the lead must float through 20 vats of water before it emerges fully purified and capable of passing the rigid tests of the inspector's desk. This makes certain, twenty times over, that there is no possibility of any acid remaining, any contamination of tan bark, and it is quite certain that the lead which has floated in the water through 20 tubs is going to be just about the last word in fineness.

The finishing steps of drying the lead in steam-heated pans to drive off the water and the subsequent regrinding with refined linseed oil can be readily enough understood. There are refinements through every step of manufacture, however, which cannot be explained in so limited a discussion, but which make Sherwin-Williams ODP White Lead a favorite with the painter. It does not get hard in the package, it is easy to break up and mix into paint, it is very white and easy working under the brush.



Sherwin-Williams Guarantee

"This package is warranted to contain nothing but strictly pure White Lead, ground in strictly pure linseed oil, and we will pay one ounce of gold for every pound of adulteration that it may be found to contain."

Rather a comprehensive guarantee, as the reader will agree, and yet we have every confidence in the absolute purity and supreme quality of our ODP White Lead that we don't hesitate for a moment in going the limit to assure the user of that quality.

Red Lead and Litharge

An entire book could be written about these two most interesting products. They are used in making such divergent products as glassware and storage batteries, rubber products and varnish, used in oil refining and in linoleum, etc.

All these departments come under the supervision of Mr. S. W. Stevens, our General Superintendent of Pigment Products Manufacture. Mr. Stevens came with us in 1910. He is a graduate of the Royal School of Mines, London, as Metallurgical Engineer. His two hobbies are golf and a reported fondness for working 24 hours a day. The portrait is not entirely characteristic because his pipe is missing.

White Lead is filled by weight. The bucket rests upon a scale and is filled with one throw of the lever. A dash of lead with a putty knife adds the necessary touch to make the scale go down. The man at the left puts in the printed direction sheet for making White Lead Paint with ODP which is enclosed in a waxed envelope. His machine forces on and stamps the self-sealing cover.



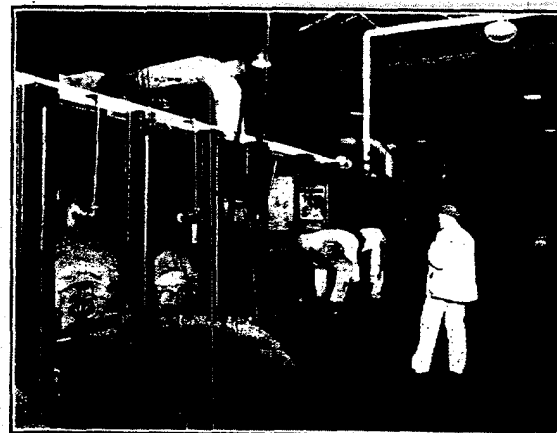
Tom Anderson is Filler, John Anderson is Capper.

The large amount of tan bark used and the extreme weight of the lead makes the use of this powerful traveling hoist car indispensable. It is tracked on overhead rails to reach every point in the large building.

Red Lead and Litharge are made by causing the lead to combine with oxygen under great heat. The pig lead is roasted in these furnaces for three days by which time it has changed to a bright yellow powder, which is litharge. At this time the furnace requires close attention, for the litharge soon begins to change to red lead. If the roasting is continued up to nine days, the change to red lead becomes complete.



The crane man is Jose Castellan



Elmer W. O'Rourke is foreman