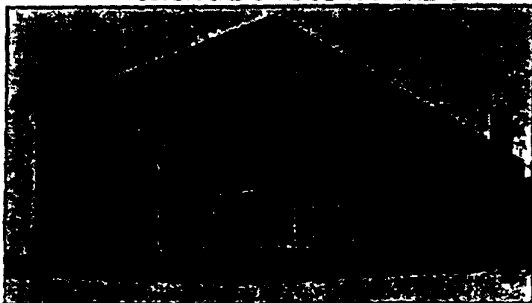


THE NEW BUILDING OF THE ARMO WHITE LEAD & COLOR WORKS, IN WHICH WHITE LEAD IS MADE BY THE NEW "MILD" PROCESS.

NEW PROCESS OF MAKING WHITE LEAD WORKS GREAT CHANGE IN PAINT INDUSTRY



The New Building of the Armo White Lead & Color Works, in Which White Lead Is Made by the New "MILD" Process.

Detroit's latest industry, and by far the most important in the paint line, is the manufacture of white lead by the "mild process," a process which is of recent discovery and which has been acquired by the Armo White Lead & Color Works, and housed in a newly completed brick, steel and concrete building costing \$200,000. The building itself is a notable addition to Detroit's factory equipment, but the "mild process" of manufacturing white lead is fascinating even to the layman.

For hundreds of years white lead has been made by the old Dutch process, which required 120 days and a large amount of labor. The product itself was all that could be desired, but the process was slow and very expensive. It required 40 men to operate a very small plant, and only 15 per cent of the lead laid away carbonated, necessitating a great deal of scrubbing and separating and another 120 days to carbonate the 25 per cent that remained. Under that system the pig lead was melted into "buckles," resembling large pretzels and laid a dozen each in earthen jars in the bottom of which was acetic acid. A great bed of tan bark a foot deep was laid, and these jars, hundreds in number, were buried in the tan bark, which was mixed with horse manure, and over these jars was placed pine lumber over which another layer of tan bark and manure was distributed to rot and more jars. In this way a great stack was built which was to remain four months. All of these "buckles" were cast by hand, the jars were filled and handled by hand, the stacks were built by hand and the process was most expensive.

But down in St. Louis was a man named Wilson H. Rowley, who worked out an improvement, and his experimentation went forward for seven years, until success was earned. The "mild process" is so absurdly simple that one wonders how the world wandered along without it so long. Here it is. The pig lead is hoisted to the third story of the plant and melted in a great cauldron. In this initial carrying to the cauldron is the only need of human labor until the finished product

appears. The stream of molten lead runs through a pipe in the bottom of the cauldron to an elevator, where it encounters a blow of superheated steam that disintegrates it into its smallest particles—so small are they that assembled they resemble a stove polish, somewhat dried—and this fine, powderlike substance is collected in large tanks of water, from whence it is carried on to broad, troughlike tables, where powerful agitators search it for any small particles of lead that remain unconverted. Air at low pressure is forced through the liquid lead and water, the combined action of air and water converting the lead into what is called a basic hydrate of lead. Observe that, in all the processes, no handling has been necessary. From the top story of the building the lead descends it way from floor to floor, through gravitation, and in its liquid form is then pumped back to complete its transformation. There remains to be done the carbonating process, which is completed by placing the lead in carbonaceous, where it is constantly agitated while it is being subjected to the action of gas pumped in under low pressure. This gas is a product of the plant itself. In 24 hours of this treatment the proper fineness and density is obtained and the finished lead—white as snow—is pumped to the drying beds, which are long strips of duck canvas laid over screens, and here it dries, the finished product. The proof that the lead has been thoroughly converted and deprived of its soluble lead salts is that these duck sheets last a long time. Heat, air, water and gas have changed the pig lead to the white lead of the trade.

Eight men are all that are required to operate the big plant with its enormous capacity of 15,000 tons a year. The "mild process" accomplishes in 20 days what the old Dutch process required 120 days to accomplish. The possibility of lead poisoning, so prevalent in the old process, is banished. Not a particle of arsenic and not a particle is lost instead of losing 3 per cent, as in the old system, the new system makes a chemical gain of 25 per cent, so that for every 100 pounds of lead put in 125 comes out. It is one of the most interesting processes in the city, the only one of its kind in the world, and places Detroit in the front rank as a paint producer.

ORDER TO CLEAN UP CITY.

Buttons, which are a new type of button, are being placed on sale Monday. The buttons are of gold and blue enamel, and the center has the inscription "Detroit—Live Is Worth Living."

The purchase of a button and the signing of a card makes one a member of the city service league, and the money thus taken in will be used for league expenses. The buttons are on sale in stores throughout the city, and citizens will be reminded of it by street car and store window signs. When sufficient buttons have been taken in any one neighborhood the wearers will be organized as a neighborhood association. The league was organized a month ago and the general purpose is the improvement of the city and the welfare of the people in every way. As a beginning the league had a general yard and alley cleaning up day, on April 14, and is offering prizes for the most attractive yard ornamentation effects. The league is also pushing a movement for public play grounds.

SERVICE LEAGUE BUTTONS READY PURCHASE GIVES MEMBERSHIP IN ASSOCIATION TO ENCOURAGE HOME BEAUTIFYING.

If you have not yet joined the City Service League, the time is now.

Buttons signifying membership have been placed on sale all over the city, and, lest any forget, signs have been placed in windows and on street cars to remind citizens that such a league



CITY SERVICE LEAGUE BUTTON exists for the purpose of beautifying Detroit.

By buying a button you become a member. The membership will be divided into district associations, each of which will encourage home beautifying and artistic gardening in its section of the city.

Cups and prizes are offered for the greatest improvement in conditions. All the district associations are to be represented in a city gathering.

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