



Coffeyville Pigment Plant

by
WALLACE HUSTED

"Pigment," says Webster, "is a coloring matter; specifically: any powder or easily powdered substance prepared as a paint by mixture with a vehicle in which it is insoluble."

But what is this powder before it becomes pigment? And how is it made into pigment?

To answer these questions, let's transport ourselves temporarily to the little manufacturing city of Coffeyville, Kansas, home of the Pigment Plant of The Sherwin-Williams Company, which is one of the largest establishments of its kind in the paint industry.

To this plant come ores of the highest grade from Sherwin-Williams' own mines in Magdalena, New Mexico, and, in special cases, from certain approved outside sources. In Coffeyville's giant smelters these ores are refined into the finished pigments which give character to many of the paint products of Sherwin-Williams and its affiliated companies. So great is the production of these smelters that large quantities of pigments are sold regularly to paint makers throughout the land.

While the processes by which ores are converted into pigments vary in detail, they are fundamentally very similar. Typical processes are those which give us zinc sulfate or white vitriol, which is used in the manufacture of lithopone, and Ozlo leaded zinc pigment, the famous "alloying" pigment that has made SWP leader among prepared house paints. For the purpose of our investigation, let us follow here the steps in the processing of Ozlo.

The lead and zinc ores from which Ozlo is derived reach Coffeyville as clean concentrates. These are chemically analyzed and segregated in storage bins according to their lead or zinc contents.

The first major step in processing is roasting the zinc ores in automatically operated roasters, during which the sulfur content is driven off and the zinc left behind in the form of the oxide.

The roasted zinc ores, the lead ores and the other lesser ingredients are now mixed carefully according to formula and fed into a smelter. Under the refining ordeal or a 2,000 degree fire the lead and zinc pass as vapors into a combustion chamber. Burned here by the admittance of air, these vapors form white clouds of the finely divided lead sulfate and zinc oxide particles which together constitute Ozlo.

These particles are next cooled by passage through one of the longest key-stone pipe lines in the world to a collection chamber where they are caused to enter cotton bags standing upright over hoppers. The pigment particles are retained on the inner walls of the bags while the furnace gases pass out through the meshes. At intervals the bags are shaken, causing the pigment -- now a snowy white powder finer even than flour -- to fall into the hoppers below. From these it is drawn into bags for shipment to every corner of the nation.