

The Art and Science of Platemaking

“Albumin Surface Plates”

“This bulletin will tell you how to make albumin plates.. It presents the most modern information available on making and running zinc surface plates.”
1953 Lithographic Technical Foundation publication

CTP and DI; “computer to plate” and “direct image.” These modern advances in digital imaging make middle-aged printers wax nostalgic about hand developing three-step offset printing plates and having to walk to work uphill in the snow. If we went back another twenty years to the 1950’s, we could see a really involved plate making process.

First, a little lithographic history. The earliest lithographic plate was a slab of Bavarian limestone. “Lithography” comes from words that mean “stone writing.” The inventor of the lithographic principle, Alois Senefelder, discovered the basic principle that greasy ink and water mutually repelled each other. This happened in the late 1790’s. He made, on the stone plate, a greasy image area and a water absorbing nonimage area. When he wet and then inked the plate, in that order, the nonimage attracted water and the image attracted the ink.

It didn’t take printers long to replace the bulky stone with a thin sheet of zinc. Rapid change, back then, meant about 100 years. Soon, the printers had adapted the metal plate to a rotary-design press. Ira Rubel accidentally discovered that when he printed on a rubber blanket first and then “offset” the image to the paper, he got a better image.

Early images were drawn on the stone with greasy crayons. Later photographic images were applied using materials that sounded like they came out of the kitchen. Albumin or egg white, casein, a milk product, and soybean protein were all used as imaging materials.

Just before World War II, there was some interest in making a better lithographic plate. The Lithographic Technical Foundation, LTF, was the forerunner of GATF, the Graphic Arts Technical Foundation. In 1953, they published “How to Make and Run Better Zinc Surface Plates.” In this technical bulletin were listed fourteen steps.