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Automotive Decorative Plating:
A Photo Portfolio of the First Golden Age of Surface Finishing

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A half-century ago, decorative plating was coming into its heyday, with the automotive industry comprising its largest segment. The cars of that era were "dripping with chrome" and new technologies seemed to be emerging every week. Ever improving coating systems and processes for multilayered copper-nickel-chromium were advancing apace. The output of area plated could be expressed in terms of square miles per year, as the engineers designed and developed the machines and processes to manufacture the millions of grilles, bumpers and other automotive body hardware that was the essence of the automobiles of that time.

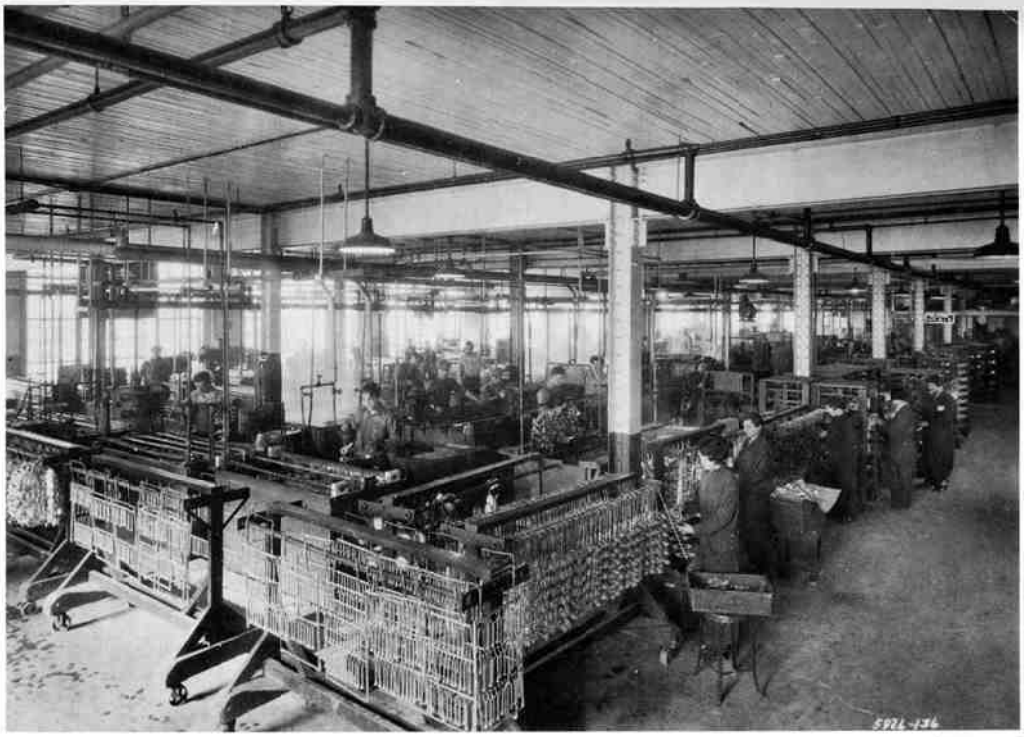
In North America, the automakers (many more than the big three at the time) did almost everything in-house, including plating. Within General Motors, the Fernstedt Division was responsible for producing much of the plated automotive body hardware, grilles, emblems, wheel covers, door handles, and on and on. Its original claim to fame was the manufacture of window regulator mechanisms, beginning in the 1920s. The Fernstedt Division had six plants (and briefly a seventh) at Detroit and Flint, Michigan, Columbus and Elyria, Ohio, Trenton, New Jersey and Syracuse, New York. At the time, Fernstedt was said to contain the largest plating facilities in the world.

The Ternstedt Division was one of many pioneers in the field of decorative plating. Along with Ford, Chrysler, other General Motors Divisions and other automobile companies consigned to history, the industry sought automotive hardware that provided a bright finish appealing to the customer, and corrosion durability that would keep the car looking new for years to come.

None of this could have been done without the suppliers, whose research and development efforts provided the plating processes to meet the needs of the automobile industry. Of course these finishes were not just limited to the automobile, as applications as diverse as marine hardware and furniture all benefited from these technologies.

Today, these plating facilities have been dismantled, and the plants have either been demolished or converted to other uses. What follows, then, is a portfolio of photographs, taken decades ago, which preserve a look at the plating facilities at the Ternstedt plants. The facilities are there, warts, encrusted plating salts and all. While many of the engineering details in these photos are lost to history, they provide a look at what many consider to be the golden age of automotive decorative plating.

Automotive decorative plating began much earlier than mid-century, as shown by the photo of the plating department at the Ternstedt-Detroit plant, taken in 1926 ⇨

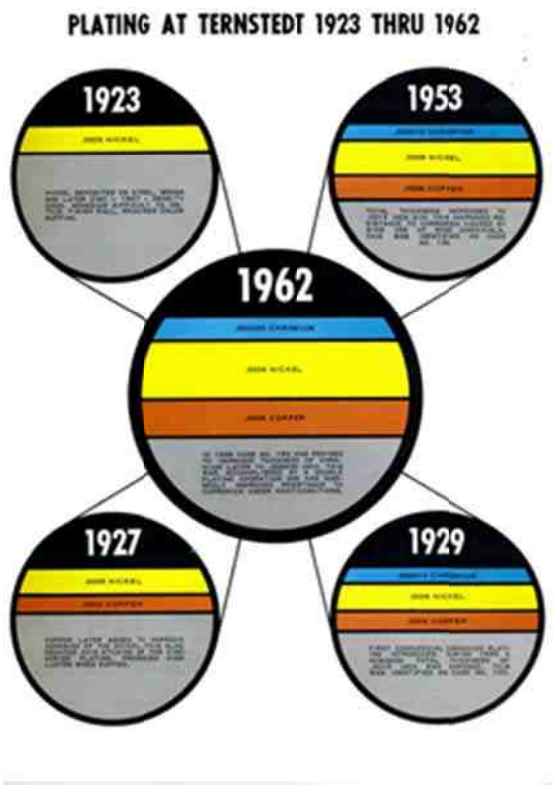


PLATING AT TERNSTEDT PLANT 16, DETROIT, MICHIGAN, IN 1926

Art in Metal Finishing – A 1930's vintage Pontiac Indian Head radiator Cap. The face is electroformed in copper, bronzed and assembled to the chromium finished die-cast ring and cap piece.

In the 1920's, the finish of choice was buffed nickel (1923), with copper added later in the decade to improve adhesion (1927). By the end of the decade, commercial chromium was introduced for the first time.

The advent of World War 2 and the explosion of technology in the post-war period wrought many changes. There was a pent-up demand for modern auto styling following the temporary halt in civilian production. This led to advances in bright corrosion resistant Cu-Ni-Cr finishes, and ultimately all of the advanced multilayer finishes that evolved in the 1960's and 70's.



The 1963 Ternstedt!
In a 1963 promotional brochure on the Ternstedt Division of G.M., this mockup displayed the variety of chromium plated parts used on the cars of the day.

A young General Motors Institute co-op student inspects rear-view mirror brackets exiting a rinse tank in 1959.

A massive hoist transfers a load of body side moldings to the next tank in the line.

A massive hoist transfers a load of body side moldings to the next tank in the line.

Looking down the copper plating side of the hoist line. Note the PVC exhaust ducts between each station.

Another view of the copper plating side of the hoist line and the exhaust ducts between each station.

Parts being transferred between rinses.

Close-up of large hoist rack for copper-nickel-chromium, including auxiliary anodes built into structure.

Racking area.

Bank of solution filters and storage tanks.

Another view of solution filters and storage tanks.

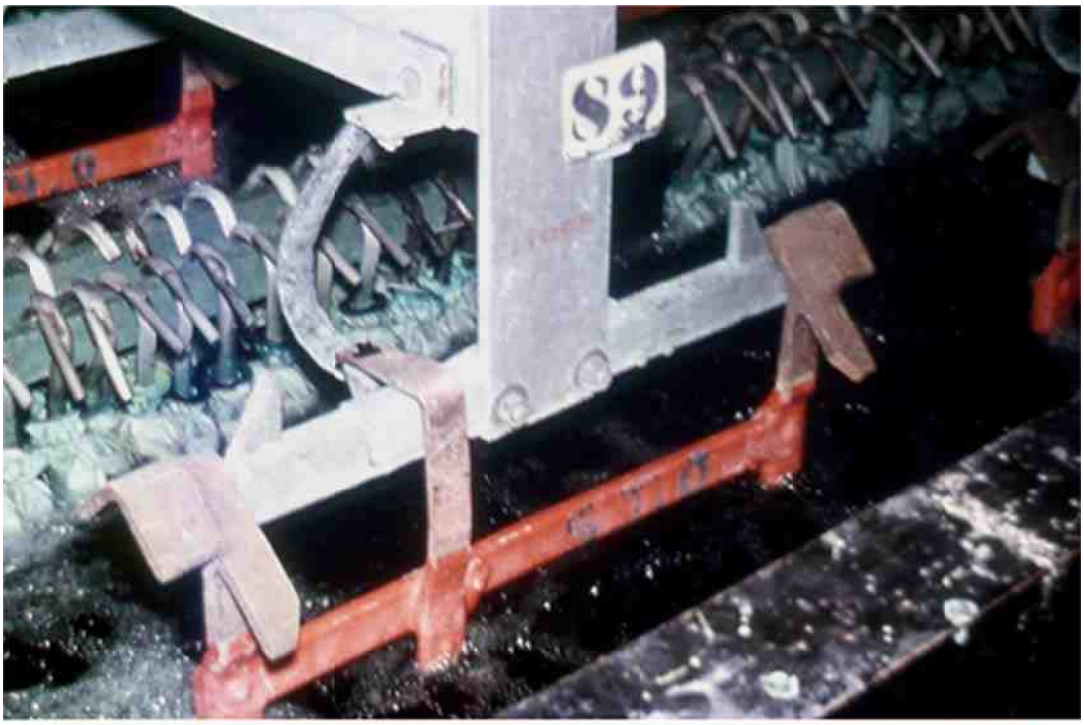
Another view of solution filters and storage tanks.

Rack of body side moldings passes by control station.

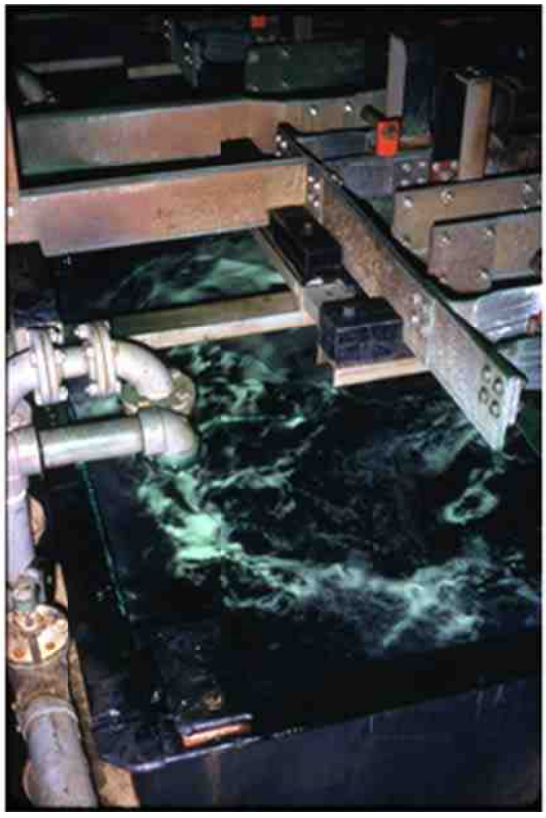
Periodic reverse controller for individual stations in the cyanide copper plating process.

Transition station from semi-bright to bright nickel process.

Bagged nickel anodes and cathral frame on automatic plating machine.

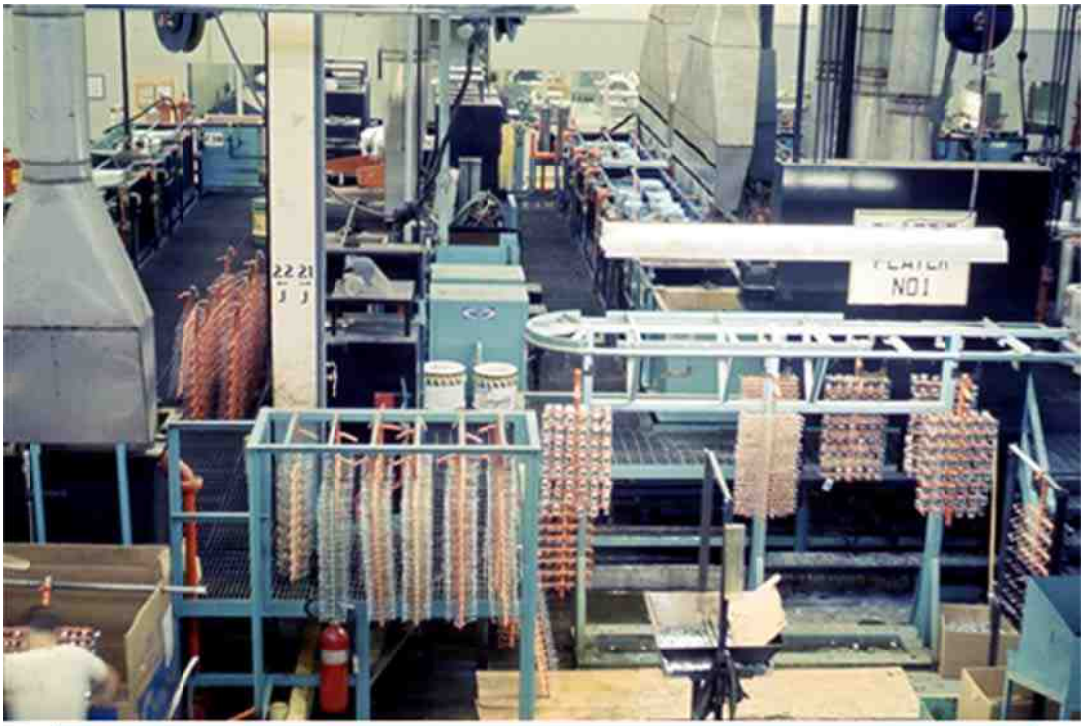


Rack on carrier in nickel tank showing auxiliary anode connection.



View of bus bar assemblies and nickel circulation from filter.

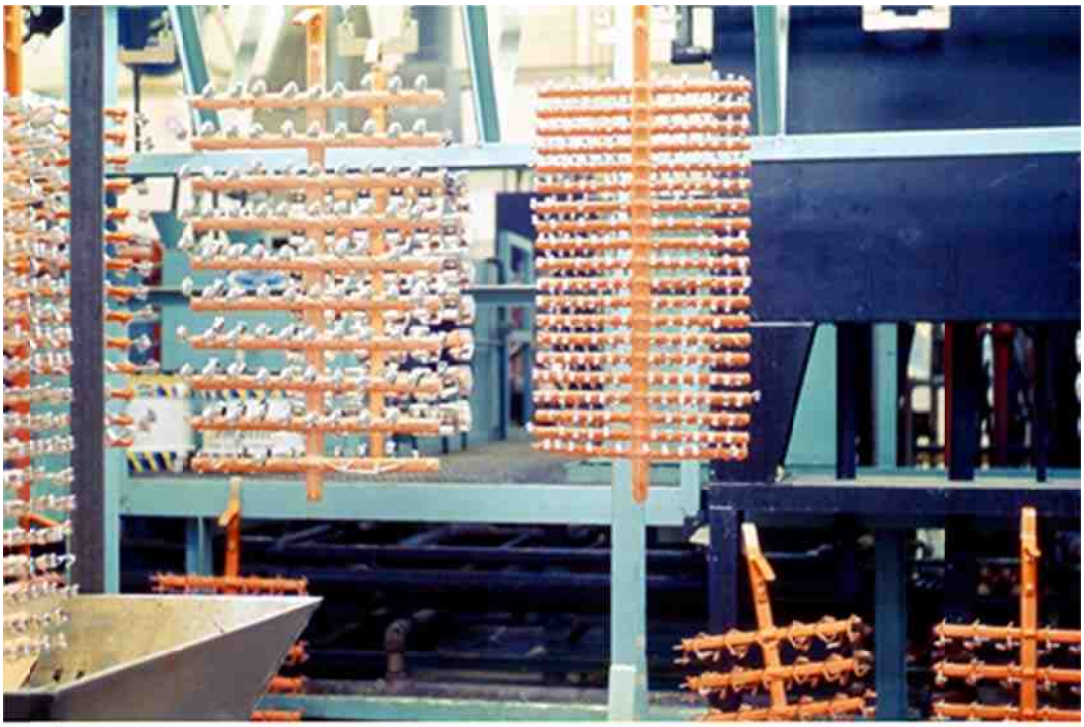
Racks in the nickel tank on a hoist line



General view of manual plated plastics line and racking area.

General view of manual plated plastics line and racking area.

Racking area for manual plated plastics line (small parts).



Small parts racked for manual plated plastics line.

Small parts racked for manual plated plastics line.

View of manual plated plastics line.

View of manual plated plastics line.

View of manual plated plastics line.

Stuff happens.