Plug and Plate



Elsyca's unique CAE technology enables design, optimisation and manufacture of ready to use, high performance racking for plating on plastics (POP) and plating on metal operations.

Eliminating weeks of extensive trial and error, reducing scrap and saving on metal consumption, the Elsyca designed rack and tooling ensure maximum optimization – *plug and plate*.

Elsyca's technology is based upon validated computational models of electrochemical processes - the result of more than 25 years of fundamental research and the application of the technological insight this information has given. This CAD/CAE technology provides an offline, virtual plating plant enabling the racking design to be cost effectively tailored to each manufacturer's specific requirements.



The results of an analysis above illustrate the poor distribution of chromium thickness on a 'standard' rack of trunk finishers. Elsyca solved this customer issue with a modified rack design making appropriate use of shielding and current thieves. Elsyca simulates all electrodeposition steps in the POP process, copper, nickel and chrome. Even the, effects of the initial, highly resistive seed layer are accurately captured.

Below is a typical example of the improvements achieved by Elsyca designed shields and current thieves. On the left side you find the plating distribution using the original set-up, on the right the results of the optimized configuration.



By doing things right from the start, you'll get faster return on investment and higher profitability down the line, allowing you to be more competitive, both in mature and emerging markets. Many times, optimization of existing processes or in an investment phase, can give you 10 to 15 percent lower costs or higher efficiency in your production – a good starting point for realizing manufacturing economies.

Together with you, Elsyca participates in the implementation of all tooling and process changes you choose to undertake and we return when the changes are complete to ensure that improvements and cost savings are made.

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