

EVER WONDERED HOW THE ELECTROPHORETIC DEPOSITION COATING PROCESS WORKS?



CHRIS NEELY
Vice President of Sales
ARMOLLOY



Through controllable electrical currents, electrolyzing coatings are able to precisely adhere a coating without deformation of the base material. Thin Dense Chrome coatings require low heat, short exposure, and small amounts of voltage to adhere to the base.

PREPPING

In order for the electrodeposited coating to adhere properly, the base material must be prepped and cleaned. With this coating, the base material plays a large factor in the success of the coating itself. Metal must be free of mill scale, heavy rust, paint or any other coating. The surface finish and Rockwell hardness are very important as well. Once the part is clean, it is ready to go through the process. The first step, and what

could be considered as the most important step is the liquid honing procedure. This is done with a non-abrasive, baking soda like material that deep cleans the pores of the substrate. This is crucial for correct and absolute adhesion of the coating. Once the part is thoroughly honed it is now ready to be coated.

COATING

The Electrolyzing process is unique. Each part is racked creating an electrical current. The tool itself is the conductor,

unlike other coating processes that conduct the entire tank. This allows for a more controllable state. The tool has a small negative voltage, between 5-14v DC current running to it. Anoding is placed in the tank and directional anoding is placed into cavities, complexities, or the inner diameter(s) of the part. This ensures a uniform deposition.

This precise technique creates a very controllable, uniform, and direct coating. With each part being individually handled and processed, we can ensure customer satisfaction and quality.

The Thin Dense Chrome Electrolyzing process creates a unique combination of benefits.

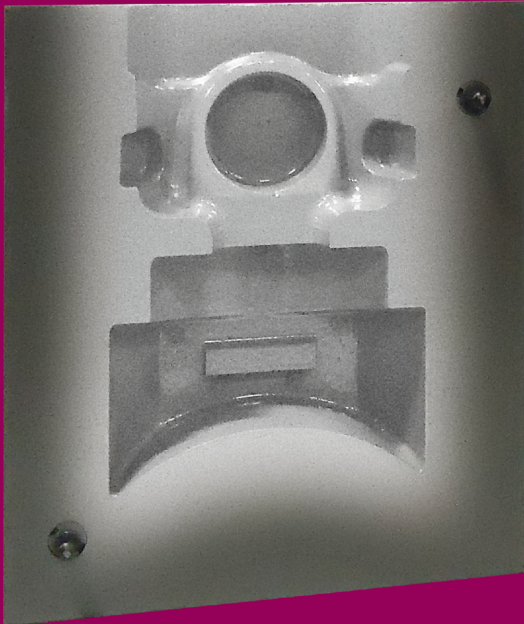
- Extreme wear resistance of up to 10x
- Increased lubricity by reducing the coefficient of friction and the inhabitation of corrosion.



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ARMOLOY TDC COATINGS FOR BETTER METAL PARTS



“This affordable material is nothing short of amazing – a true chrome material that wears and wears. When it gets a little thin, it can be easily removed and replaced at the original thickness very quickly at room temperature. Dimensional accuracy maintained at less than .0003” per side for thickness. We have seen core box life extended 5 times versus uncoated boxes.”

Jack Palmer

President, Palmer Manufacturing & Supply



ARMOLOY TDC Coating is a low-temperature, multi-state surface finishing process providing protection and performance benefits to all ferrous and most non-ferrous metals. Unlike conventional hard chrome plating operations, TDC conforms precisely to details in metal tools, resulting in a hard, slippery, and corrosion-resistant tool surface.

ADVANTAGES:

- 78Rc Surface Hardness
- Enhanced Corrosion Resistance
- Reduced Maintenance & Part Replacement Costs
- Reduced Wear & Friction in Moving Parts
- Improved Release Characteristics
- Absolute Adhesion to Base Metal
– no chipping, cracking, flaking or peeling