New Aldoa Plating Process Provides “High Nickel” Deposits With More Than 95% Plating Efficiency

The Aldoa Company (Detroit, MI), a leading innovator in the research, development and worldwide supply of advanced, environmental-friendly chemicals for the plating industry, has developed an improved version of its acid zinc-nickel alloy plating process, Novalyte HNZN. This new process meets the new automotive plating specifications for “high-nickel” requiring more than 10% nickel content for fasteners depending on usage or requirements. The deposit from this new system is bright with high ductility while being economical and simple to maintain. It can be used with either barrel or rack applications.

Novalyte HNZN uses a mixed salt bath comprised of sodium or potassium chloride and ammonium chloride with the salt concentration being very low. This allows the plating solution to remain clear at ambient temperatures eliminating the need to “keep it hot” during shutdowns saving energy. Since the solution stays clear, cleaning and maintenance is significantly reduced. Novalyte HNZN also has a minimum of 95% plating efficiency compared to conventional alkaline systems, which average 50%.

The Aldoa process uses only one rectifier as opposed to conventional processes, which require separate rectifiers for zinc and nickel anodes. The new system provides longer filter life because it uses 75% less ammonium chloride as compared to conventional acid zinc systems, which can block filters resulting in high maintenance costs. The system chemistry has been optimized to eliminate anode polarization. Novalyte HNZN uses a weak nickel complexor at lower concentrations avoiding wastewater problems and the plating tank does not require frequent cleaning.

Above all, Novalyte HNZN provides the most economical and simple to maintain chemistry.

Aldoa has been providing chemical products, research and support to plating and coating industries for nearly half a century. Today, using a worldwide distribution network, its products cover a wide range of finishing processes including cadmium, copper and copper alloy, nickel, zinc and zinc alloy plating and chromium additives; phosphate coatings; metal cleaning; numerous aluminum treatments; chromate conversion coatings; and solutions for wastewater treatment.