

Electroless Nickel Plating Process Pdf

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The nickel plating process is used extensively for decorative, engineering and electroforming Autocatalytic (electroless) nickel plating processes are commercially important, but are outside the scope of this article. The annual worldwide consumption of nickel for electroplating, including nickel consumed as plating salts, is. Jan 1, Electroless nickel plating is a highly disturbed process by the bath loading [46, 73, 74]. In addition to the fact, that the existence of loading, i.e. the substrate, is essential for the progress. The typeof heating that is used in the plating process is also of great concern. Electroless nickel plating tanks can be heated internally or externally. Excessive localized overheating can cause plate-out, roughness, or even bath decomposition. Lack of agitation of the plating solution can also cause problems. Solution, THE ELECTROLESS NICKEL PLATING BATH: COMPONENTS Electroless nickel (EN) plating is undoubtedly the most important catalytic plating process in use today. The principal reasons for its widespread commercial and industrial use are to be found in the unique properties of the EN deposits. tal aspects of electroless nickel actually serve as a treatise on the fundamentals of electroless plating in general. The material is discussed in terms of the functions and mechanisms involved with the bath components: (1) The source of nickel ions, (2) The reducing agent, (3) The completing agents, and (4) The stabilizers or inhibitors. Electroless nickel deposits are functional coatings and are rarely used for decorative purposes only. The primary criteria for using electroless nickel generally falls within the following categories: 1) Corrosion resistance. 2) Wear resistance. 3) Hardness. 4) Lubricity. 5) Solderability and bondability.