

CONTROL OF ELECTROMAGNETIC SIGNALS OF COINS THROUGH MULTI-PLY PLATING TECHNOLOGY

ABSTRACT

The present invention relates to novel metallic composites that are useful as coinage materials. These composites are produced through a multi-ply plating process and are designed to overcome difficulties associated with calibrating vending machines that can result in fraud. In one embodiment, the metallic composite comprises a steel core over which nickel and then a non-magnetic metal such as copper, brass or bronze is deposited as a layered pair. The magnetic and non-magnetic metals may also be applied in the reverse order, with the copper, brass or bronze applied directly over the steel and then covered by the nickel. The electromagnetic signature (EMS) of the composite is controlled by defining the thickness of the deposited metal layers. Advantageously, the invention overcomes problems associated when different coins are made from the same alloy and have similar sizes, and therefore cannot be distinguished by vending machines.

(Fig. 1)