SYSTEM AND METHOD FOR RESTORING OR REGENERATING AN ARTICLE

ABSTRACT

A system for restoring or regenerating an article, such as turbine blade or vane for a gas turbine engine, includes a first cathode (104) and a second cathode (106) operably disposed in a deposition chamber (102). The first cathode (104) includes a first deposition material substantially similar in composition to the material of a residual substrate. The second cathode (106) includes a second deposition material able to form an environmental coating on a restored/regenerated component. The first and second cathodes may be sequentially operated without interrupting the vacuum conditions in the deposition chamber. A method for restoring or regenerating an article includes utilizing the first cathode (104) to deposit a layer of first deposition material onto the residual substrate and subsequently utilizing the second cathode (106) to apply the environmental coating. Both depositions utilize a common deposition chamber (102) without interrupting the vacuum conditions between depositions.

Figure 1