

A METHOD FOR RENEWING DIFFUSION COATINGS ON SUPERALLOY SUBSTRATES

ABSTRACT

A method for controlled removal of a portion of a diffusion coating from the outer surface of a nickel-containing superalloy article. A diffusion coating typically includes a diffusion layer (16) between an outer aluminide layer (14) and the nickel-containing substrate. The method includes contacting the coated superalloy article in
5 a preselected chemical stripping solution for a preselected period of time sufficient to remove only the outer aluminide layer (14), without substantially affecting the diffusion layer (16) underlying the outer aluminide layer (14). After neutralizing the stripping solution, the article can be inspected and repaired as needed. The aluminide outer layer (14) can then be restored in a conventional manner.

Figure 1.