

ABSTRACT

REPAIR OF COATED TURBINE VANES INSTALLED IN MODULE

A method of repairing a damaged coated vane from a turbine module without removing the vane from the module is taught. The method includes locally removing the coating in the vicinity of the damage as well as any underlying damage in the superalloy substrate. A diffusible coating precursor is then applied to the damage site. A heat treating fixture is then mounted on the vane and repair site is heated to up to 2000°F in an inert environment to interdiffuse the coating precursor and the substrate. After the diffusion anneal, the vane is cleaned and the module is returned to service.

Fig. 1