

METHOD FOR APPLYING DIFFUSION ALUMINIDE COATING ON A SELECTIVE AREA OF A TURBINE ENGINE COMPONENT

ABSTRACT

A method for applying diffusion aluminide coating on a selective area of a turbine engine component and the coating produced by that method is disclosed. A quartz infrared lamp heats only substantially the localized area of the component to be coated, rather than the complete part. Either halide activated or non-activated tape (20) is applied on the area to be coated and is held in place during coating using a high temperature dimensionally stable tape holder (30) manufactured from graphite or ceramic. The quartz infrared lamp is used to heat only the desired area to a coating temperature of about 982.22°C (1800° F.) to about 1093.33°C (2000° F.) under an inert atmosphere for about 3 to about 8 hours to achieve the desired aluminide coating thickness. No powder masking of the machined surface area is required. Due to the localized heating, aluminum vapor generated from the tape will only deposit aluminide coating on the taped area.

Figure 3



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