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STATIC CHEMICAL VAPOR DEPOSITION OF γ -Ni + γ' -Ni₃Al COATINGS

ABSTRACT

A static chemical vapor deposition (CVD) process may be used to deposit a coating including a γ -Ni + γ' -Ni₃Al phase constitution over a substrate. A static CVD process is performed in a closed system that may include the substrate, and coating material and an activator. The γ -Ni + γ' -Ni₃Al coating may be modified by one or more additional elements, including, for example, Hf, Y, Zr, Ce, La, Si, Cr, or additional elements present in the substrate. A static CVD process may include co-deposition of two or more elements, and may also include sequential static CVD steps, each of which is performed in a closed system.

FIG. 1B