

ABSTRACT OF THE DISCLOSURE

According to the invention, an article that is exposed to high temperatures, e.g., over 1000 °C during operation is disclosed. In one embodiment, a turbine blade for a gas turbine engine includes a directionally solidified metallic substrate, e.g., a superalloy, which defines an airfoil, a root and a platform located between the blade and root. The platform has an underside adjacent the root, and a corrosion resistant ceramic overlay coating such as a stabilized zirconia is located on the underside of the platform and the neck. The applied coating prevents corrosion and stress corrosion cracking of blades in these regions.

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