

DOVETAIL SURFACE ENHANCEMENT FOR DURABILITY

ABSTRACT

A gas turbine engine blade (10) having a dovetail (16) with an enhanced surface for durability is disclosed. The blade (10) includes an airfoil section (12) and a dovetail section (16) disposed opposite the airfoil section (12). The dovetail section (16) has an outer surface (44), at least a portion of which has residual compressive stresses resulting from a plurality of peening operations. The dovetail section (16) also includes a copper-nickel-indium wear coating layer (42) disposed over the outer surface (44) having residual compressive stresses and a lubricant coating layer (46) disposed over the copper-nickel-indium wear coating layer (42), wherein the lubricant coating layer (46) is lead-free.

Fig. 1