

TURBINE BLADE TIP SQUEALER AND REBUILD METHOD

Abstract of the Disclosure

A turbine blade (10) with a tip squealer (28) and method of rebuilding a turbine blade (10) for a gas turbine engine. The blade (10) is of the type including an airfoil (12) having first and second spaced-apart sidewalls (20, 22) defining an interior void (30) and joined at a leading edge and a trailing edge (24, 26). The first and second sidewalls extending from a root (27) disposed adjacent the dovetail (14) to a tip cap (36) for channeling combustion gases, and a squealer tip (28) including at least one tip rib (38) extending outwardly from the tip cap (36). The method includes the steps of removing the squealer tip (28), including the at least one rib tip (38), from the tip cap (36) and adding new material to the tip cap (36) to serve as a new squealer tip (28'). A plurality of spaced-apart notches (50A-50H) is formed in the new material between the leading edge (24) and the trailing edge (26) of the airfoil (12). At least one hole (54) is formed in each notch (50A-50H) communicating with the interior void (30) of the airfoil (12) for channeling cooling air from the interior void (30) of the airfoil (12) to thereby form a squealer tip (28').

Fig. 1