

TIP FABRICATION FOR ROTOR BLADE OR STATOR VANE AIRFOIL

ABSTRACT

A method comprises identifying an engine-run tip position for an airfoil having a tip section and a root section. The engine-run tip position is displaced and rotated with respect to a nominal position, as defined with respect to the root section before engine running. A replacement tip is formed on the airfoil, and a machining datum is defined adjacent the replacement tip. The tip section is translated and rotated to locate the replacement tip in the nominal position, without respect to a location of the root section. The tip section is restored to a nominal profile by machining the replacement tip along a machining path defined with respect to the machining datum, wherein the machining path is independent of the displacement and rotation of the engine-run tip position and independent of the position of the root section.

Figure 1