

ABSTRACT

NON AXIS-SYMMETRIC STATOR VANE ENDWALL CONTOUR

An airfoil comprises pressure and suction surfaces extending axially from a leading edge to a trailing edge and radially from a root section to a tip section, defining a mean span therebetween. An inner endwall defines an inner endwall contour extending axially and circumferentially from the root section, and an outer endwall defines an outer endwall contour extending axially and circumferentially from the tip section. The inner and outer endwall contours are defined by varying radial deviations from circumferentially uniform nominal inner and outer radii, where one of the radial deviations varies axially and circumferentially by at least three percent of a mean span of the airfoil.

Fig. 2