

TURBINE NOZZLE SEGMENT AND METHOD OF REPAIRING SAME

ABSTRACT OF THE DISCLOSURE

A method for repairing a turbine nozzle segment (10) having at least two vanes (12) disposed between outer and inner bands (14,16) includes separating the outer and inner bands (14,16) from the vanes (12), and forming one slot (36) for each vane (12) through the outer band (14) and one slot (32) for each vane (12) through the inner band (16). A newly manufactured replacement vane (38) is provided for each one of the original vanes (12). Each replacement vane (38) has an outer boss (48) formed on an outer end (44) thereof and an inner boss (50) formed on an inner end (46) thereof. Then, each outer boss (48) is inserted into a corresponding one of the outer band slots (36), and each inner boss (50) is inserted into a corresponding one of the inner band slots (32). Once the parts are so assembled, each outer boss (48) is welded to the outer band (14) on the cold side (18), and each inner boss (50) is welded to the inner band (16) on the cold side (24). Each replacement vane (38) is also brazed to the outer and inner bands (14,16) on the respective hot sides (20, 26) thereof.

Figure 4