

Abstract

METHOD AND DEVICE FOR THE ULTRASONIC PEENING OF THE "AXIAL" RECESSES THAT ATTACH BLADES TO A ROTOR

The invention relates to an apparatus and to a method for the surface treatment and compressive prestressing by peening of a wall (2c) of at least one oblong cavity (2) formed in a part (1), said cavity (2) opening to the outside via a lateral mouth (2a) and having two ends presenting frontal openings (3). The wall (2c) of the cavity is ultrasonically peened by mobilizing a plurality of beads (10) in a chamber (12) delimited by said wall (2c) of said cavity (2), a vibratory surface (8a) closing off said mouth (2a) of said cavity (2), and closing-off means (14) closing off said openings (3), by means of a sonotrode (8) excited by means for producing ultrasonic oscillations (18). The method and the apparatus are particularly intended for treating a turbine disk (1) comprising a number of axial recesses (2) formed in the periphery of said disk (1) and having wall portions (2'c) which diverge from each mouth (2a).

Figure 5