

Title (en)
METHOD FOR THE SURFACE TREATMENT OF A STAINLESS STEEL WORKPIECE, AND MEANS FOR IMPLEMENTING THE METHOD

Title (de)
VERFAHREN ZUR OBERFLÄCHENBEHANDLUNG EINES WERKSTÜCKS AUS ROSTFREIEM STAHL UND VORRICHTUNGEN ZUR DURCHFÜHRUNG DES VERFAHRENS

Title (fr)
PROCÉDÉ DE TRAITEMENT DE SURFACE D'UNE PIÈCE EN TRAITEMENT EN ACIER INOXIDABLE, ET MOYENS POUR LA MISE EN OEUVRE DU PROCÉDÉ

Publication
EP 3272913 B1 20201014 (EN)

Application
EP 17001237 A 20170720

Priority
IT 201600076274 A 20160720

Abstract (en)
[origin: EP3272913A1] Method for the surface treatment of a stainless steel workpiece, characterized in that it comprises at least the following steps: - shot peening/shot blasting of at least one surface of said workpiece, wherein there are used shots/beads made of electrocast austenitic stainless steel, respectively stainless steel obtained from metal wire, and which are essentially spherical, respectively cylindrical, with a diameter of the spherical body, respectively of the cross section of the cylindrical body, substantially from around 0.4 to 0.8 mm; said method being implemented in an automatic turbine system with inverter, which controls the continuous variation of the rotation speed of the turbine motor and therefore the blasting speed of the shot/beads, so that on said at least one surface of said workpiece there is provided a surface micro-roughness, having micro-peaks and micro-valleys that reduce the area of contact of the worked surface, and - electro-polishing of said at least one surface of the workpiece by means of tank with a galvanic bath with electrolytic cell, wherein said tank, respectively a coating thereof, made of an electroconductive material, is electrically connected to the cathode means of the electrolytic cell, with formation of a corresponding electrical field extended to the total surface of the tank, respectively of its coating, and said workpiece is arranged in the galvanic bath in electrical connection with respect to the anode means of the electrolytic cell and is maintained during the galvanic treatment at a distance variable from around 100 to 150 mm with respect to the cathode means, so that said surface micro-roughness is reduced, lowering and rounding by removal of material the peaks of said micro-peaks of the surface of the workpiece and improving the non-stick and slip properties of the workpiece.

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CPC (source: EP)
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