

Title (en)

METHOD OF INTRODUCING RESIDUAL COMPRESSIVE STRESSES INTO A SHAFT, IN PARTICULAR INTO SHAFT NOTCHES

Title (de)

VERFAHREN ZUM EINBRINGEN VON DRUCKEIGENSCHANNUNGEN IN EINE WELLE, INSBESONDERE IN WELLENKERBEN

Title (fr)

PROCÉDÉ POUR INTRODUIRE DES TENSIONS PROPRES DE PRESSION DANS UN ARBRE, NOTAMMENT DANS DES RAINURES D'ARBRE

Publication

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Application

EP 07712293 A 20070223

Priority

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Abstract (en)

[origin: EP1865080A1] The manufacture of shafts useful in steam turbine, comprises arranging diameter transitions (3) and/or notch area between neighboring steps (2) of the shaft, controllably quenching the diameter transitions and/or notch area within a framework of a thermal treatment of the shaft, spraying the diameter transitions and/or notch area for quenching purposefully with a quenching medium, and cooling the diameter transitions and/or notch area by a dipping procedure. The shafts are implemented as stepped shafts with sequential steps of different diameter. The manufacture of shafts useful in steam turbine, comprises arranging diameter transitions (3) and/or notch area between neighboring steps (2) of the shaft, controllably quenching the diameter transitions and/or notch area within a framework of a thermal treatment of the shaft, spraying the diameter transitions and/or notch area for quenching purposefully with a quenching medium, and cooling the diameter transitions and/or notch area by a dipping procedure. The shafts are implemented as stepped shafts with sequential steps of different diameter. The diameter transitions and/or notch area are manufactured with an oversize (8) provided on a final end contour (7) and have a radius of 25-50 mm in its thermal treatment contour. The thermal treatment contour (6) is removed during the production of the final end contour and/or after quenching. The oversize has a value of 10-40 mm related to the final end contour of the wave.

IPC 8 full level

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