Title (en)

METHOD FOR CALIBRATING A MEASURING DEVICE FOR INSPECTING SURFACES ON THE BASIS OF BARKHAUSEN NOISES FOR A SPECIFIED COMPONENT GEOMETRY

Title (de)

VERFAHREN ZUM KALIBRIEREN EINER MESSVORRICHTUNG ZUR OBERFLÄCHENPRÜFUNG BASIEREND AUF BARKHAUSENRAUSCHEN FÜR EINE VORBESTIMMTE BAUTEILGEOMETRIE

Title (fr)

PROCÉDÉ D'ÉTALONNAGE D'UN DISPOSITIF DE MESURE DESTINÉ À L'INSPECTION DE SURFACES, BASÉ SUR LE BRUIT BARKHAUSEN POUR UNE GÉOMÉTRIE DE PIÈCE PRÉDÉTERMINÉE

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Application

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Abstract (en)

[origin: WO2013149775A1] The invention relates to a method for calibrating a measuring device for inspecting surfaces on the basis of Barkhausen noises for a specified component geometry. The method according to the invention is characterized in that a first calibration curve (C1) is specified which is independent of the component geometry and which describes the dependency between surface hardness values (SH) and measured Barkhausen noise signals (BN). A first Barkhausen noise signal (BN1) is ascertained using the measuring device for a first reference component which corresponds to the specified component geometry and which has a first surface hardness value (SH1). Furthermore, a second Barkhausen noise signal (BN2) is ascertained using the measuring device for a second reference component which corresponds to the specified component geometry and which has a second surface hardness value (SH2) that is lower than the first surface hardness value (SH1). Finally, a second calibration curve (C2) is ascertained, wherein the first calibration curve (C1) is fitted to the first Barkhausen noise signal (BN1) at the first surface hardness value (SH1) and to the second Barkhausen noise signal (BN2) at the second surface hardness value (SH2). A surface hardness value (SH) can be assigned to the measured Barkhausen noise signal (SH) of a component (1) with the specified component geometry using the second calibration curve (C2) during the operation of the measuring device.

IPC 8 full level

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