Title (en)

METHOD FOR INDUCTIVE SURFACE HARDENING

Title (de)

VERFAHREN ZUM INDUKTIVEN RANDSCHICHTHÄRTEN

Title (fr)

PROCÉDÉ DE DURCISSEMENT DE SURFACE PAR INDUCTION

Publication

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Application

EP 21707672 A 20210222

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Abstract (en)

[origin: WO2021165532A1] The invention provides a method for inductive surface hardening of a surface (2a) running around an annular component made from a hardenable steel, which method achieves even and uninterrupted hardening. To do this, a) a starting zone is brought to a hardening temperature by means of an inductor (1a, 1b, 3a, 3b) and is quenched by means of a spray (1c, 3c). Subsequently, b) the surface (2a) is hardened by means of a stationary inductor assembly (1) and a movable inductor assembly (1, 3), wherein the movable inductor assembly (3) is moved along the surface (2a) and, at the same time, the annular component (2) rotates about an axis of rotation (X) in order to move the surface (2a) to be hardened along the stationary inductor assembly (1), the speed (V2) of the movable inductor assembly (3) along the surface (2a) being greater than the circumferential speed (V1) of said surface. Then, c) an end zone (E) of the surface (2a) is hardened so that the at least one leading inductor (1a, 3a), which arrives first at the end zone (E), preheats the end zone (E), until the trailing inductor (1b, 3b) is located at the end zone (E) and the end zone (E) is fully heated to the hardening temperature. Finally, the fully heated end zone (E) is quenched by means of a spray (1c, 3c, 5).

IPC 8 full level

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Citation (search report)

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