

Title (en)

Method and device for strengthening of reinforcing bars for concrete.

Title (de)

Verfahren und Anlage zur Verfestigung von Betonstahl.

Title (fr)

Méthode et dispositif pour augmenter la résistance d'acier d'armature.

Publication

**EP 0469410 B1 19940601 (DE)**

Application

**EP 91112149 A 19910720**

Priority

DE 4024653 A 19900803

Abstract (en)

[origin: EP0469410A1] Method for hardening reinforcing bars for concrete, in particular weldable reinforcing bars produced by hot rolling, the reinforcing bars being subjected to cold mechanical deformation in a continuous process and thereby adjusted, inter alia, in respect of their yield strength and breaking elongation. The reinforcing bars are subjected to multi-stage bending, without torsion, around a bending roller (5, 6) in various equidistant, mutually offset bending planes and thereby cold work/hardened in the bending planes along a plurality of superposed axes. In the process, a lengthening of the reinforcing rods is achieved. The yield strength and breaking elongation are adjusted by the extent of this lengthening. A device for carrying out the method is also disclosed. <IMAGE>

IPC 1-7

**B21C 19/00**; **C21D 7/10**

IPC 8 full level

**B21D 3/05** (2006.01); **B21F 9/00** (2006.01); **C21D 7/10** (2006.01)

CPC (source: EP)

**B21D 3/05** (2013.01); **B21F 9/00** (2013.01); **B21F 9/005** (2013.01); **C21D 7/105** (2013.01)

Cited by

CN107604139A

Designated contracting state (EPC)

AT BE CH DK ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)

**EP 0469410 A1 19920205**; **EP 0469410 B1 19940601**; AT E106287 T1 19940615; DE 4024653 C1 19910725; DE 9106386 U1 19910808; DK 0469410 T3 19940711; ES 2054405 T3 19940801

DOCDB simple family (application)

**EP 91112149 A 19910720**; AT 91112149 T 19910720; DE 4024653 A 19900803; DE 9106386 U 19910524; DK 91112149 T 19910720; ES 91112149 T 19910720