Title (en)

Method for bending metal material, bending machine, bending-equipment line, and bent product

Title (de)

Verfahren zum Biegen von Metallmaterial, Biegemaschine, Biegeausrüstungsstrang und gebogenes Produkt

Title (fr)

Procédé de cintrage d'un matériau métallique, machine de cintrage, équipement de ligne de cintrage et produit plié

Publication

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Application

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Abstract (en)

[origin: EP1857195A1] The invention provides: a method for bending a workpiece in which, in a bending process, while successively or continuously feeding the workpiece held by a supporting unit from an upstream side of the supporting unit, bending is performed at a downstream side of the supporting unit; a bending machine; and a bending-equipment line. The bending method includes: supporting the metal material with a movable roller die; controlling the position of the movable roller die and/or the moving speed of the metal material; heating the metal material in a temperature range in which the heated portion can be plastically deformed and in a temperature range in which quenching can be performed, by using a heating unit that is provided around the outer circumference of the metal material, to apply a bending moment to the heated portion; and rapidly cooling the heated portion, by using a cooling unit that is provided around the outer circumference of the metal material. According to the present invention, even in a two-dimensional or three-dimensional continuous bending operation in which the metal material is two-dimensionally or three-dimensionally bent in different directions, and even when a high-strength metal material is bent, it is possible to effectively obtain a metal material having excellent shape fixability and uniform hardness distribution at low costs. Therefore, the bending method of the invention can be widely applied as an art for bending sophisticated automobile parts.

IPC 8 full level

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Citation (search report)

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