

Title (en)
METHOD FOR PRODUCING HIGH-STRENGTH COLD-FORMED STEEL PRODUCTS FROM A HOT ROLLED STRIP, SAID PRODUCTS EXHIBITING GOOD MALLEABILITY

Title (de)
VERFAHREN ZUM HERSTELLEN VON HOCHFESTEN, AUS EINEM WARMBAND KALTVERFORMTEN STAHLPRODUKTEN MIT GUTER DEHNBARKEIT

Title (fr)
PROCEDE POUR FABRIQUER DES PRODUITS EN ACIER DE GRANDE RESISTANCE ET DE BONNE MALLEABILITE, FORMES A FROID A PARTIR D'UN FEUILLARD LAMINE A CHAUD

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Abstract (en)
[origin: WO03002772A1] The invention relates to a method for producing a high-strength cold-formed product from a hot-rolled strip, said product exhibiting good malleability. According to said method, a steel comprising (in wt.%): C: 0.01 0.25 %, Si: 0.01 1.50 %, Mn: 0.50 2.00 %, P: <= 0.08 %, S: <= 0.01 %, Al: 0.001 1.50 %, Cr: <= 0.60 %, Mo: <= 0.60 %, N: < 0.02 %, at least one micro-alloy element from the group Ti: <= 0.20 %, Nb: <= 0.06 %, V: <= 0.15 %, the remainder being iron and the usual impurities is cast to form an input stock such as slabs, thin slabs or a cast strip. Starting from an initial hot-roll temperature, at which the micro-alloy elements remain essentially dissolved, the input stock is hot-rolled to form a hot-rolled strip. Said strip is firstly wound at a winding temperature of less than 600 DEG C and then cold formed into a product at a cold formation degree which is not less than 2 % and not greater than the deformation limit. The cold-formed product is annealed at a temperature and for a period which are less those required for complete recrystallization. The inventive method enables a cold formed product to be produced, said product exhibiting high strength, malleability and plasticity in the cold formed state.

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Cited by
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