

Title (en)  
Method for generating a flat steel product with an amorphous, semi-amorphous or fine crystalline structure and flat steel product with such structures

Title (de)  
Verfahren zum Erzeugen eines Stahlflachprodukts mit einem amorphen, teilamorphen oder feinkristallinen Gefüge und derart beschaffenes Stahlflachprodukt

Title (fr)  
Procédé destiné à générer un produit plat en acier avec une structure cristalline fine, partiellement amorphe ou amorphe et produit plat en acier conçu de la sorte

Publication  
**EP 2759614 B1 20190102 (DE)**

Application  
**EP 13152793 A 20130125**

Priority  
EP 13152793 A 20130125

Abstract (en)  
[origin: EP2759614A1] A molten steel containing 1.2-7 wt.% silicon, 0.4-4 wt.% boron, 0.5-4 wt.% carbon and 1.5-8 wt.% phosphorus, optionally containing 5 wt.% or less copper, 10 wt.% or less chromium, 10 wt.% or less aluminum, 0.5 wt.% or less nitrogen, 2 wt.% or less niobium, 3 wt.% or less manganese, 2 wt.% or less titanium, 2 wt.% or less vanadium, and remainder of iron and unavoidable impurities is cast in a casting device (2). The obtained cast strip (B) is cooled, to obtain a flat steel product having an amorphous, partially amorphous or fine crystalline structure. A molten steel containing 1.2-7 wt.% silicon, 0.4-4 wt.% boron, 0.5-4 wt.% carbon and 1.5-8 wt.% phosphorus, optionally containing 5 wt.% or less copper, 10 wt.% or less chromium, 10 wt.% or less aluminum, 0.5 wt.% or less nitrogen, 2 wt.% or less niobium, 3 wt.% or less manganese, 2 wt.% or less titanium, 2 wt.% or less vanadium, and remainder of iron and unavoidable impurities is cast in a casting device (2). The obtained cast strip (B) is cooled, to obtain a flat steel product having an amorphous, partially amorphous or fine crystalline structure. The particle size of fine crystalline microstructure is 10-10000 nm.

IPC 8 full level  
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CPC (source: EP US)  
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Cited by  
DE102019122515A1; DE102019004114A1; WO2021032858A1; US10780492B2; US10695789B2

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