

Title (en)

Stainless steel for manufacturing drawn wire, especially tyre reinforcement wire, and process of manufacturing said wire

Title (de)

Rostfrei Stahl zum Herstellun von gezogenen Draht, insbesondere von Reifenverstärkungsdraht, und Herstellungsverfahren

Title (fr)

Acier inoxydable pour l'élaboration de fil tréfilé notamment de fil de renfort de pneumatique et procédé de réalisation dudit fil

Publication

EP 0859064 A1 19980819 (FR)

Application

EP 98400241 A 19980205

Priority

FR 9701858 A 19970218

Abstract (en)

A method is claimed for the production of a drawn wire, notably a pneumatic reinforcing wire with a diameter of less than 0.3 mm, by drawing from a base machine wire with a diameter greater than 5 mm or from a previously drawn wire based on a stainless steel with a balanced composition conforming to given individual limits for its various components. The steel has set limits for its content of oxide inclusions and its composition conforms to given relationships between its components. The base wire is subjected to a wire drawing operation satisfying the following conditions:- a) a cumulative rate of deformation greater than 6; b) keeping the wire, during the wire drawing operation and between wire drawing operations, at a temperature of less than 650 degrees C, and preferably at a temperature of less than 600 degrees C, without reheating between the wire drawing passes. The stainless steel used in this method is also claimed.

Abstract (fr)

Procédé d'élaboration d'un fil tréfilé, notamment de fil de renfort de pneumatique de diamètre inférieur à 0,3 mm par tréfilage d'un fil-machine de base d'un diamètre supérieur à 5 mm ou d'un fil préalablement tréfilé de base d'un acier de composition pondérale suivante : carbone <= 40. 10<-3>%, azote <= 40. 10<-3>%, le carbone et azote satisfaisant la relation C + N <= 50 10<-3>% 0,2% <= silicium <= 1,0%, 0,2% <= manganèse <= 5%, 9% < nickel <=12%, 15% <= chrome <= 20%, 1,5% <= cuivre <= 4%, soufre <= 10.10<-3>%, phosphore < 0,050%, 40.10<-4>% <= oxygène total <= 120.10<-4>%, 0,1.10<-4>% <= aluminium <= 20.10<-4>%, magnésium <= 5.10<-4>%, 0,1.10<-4> % <= calcium <= 5.10<-4>%, titane <= 50.10<-4>%, des impuretés inhérentes à la fabrication, acier dans lequel les inclusions d'oxydes ont, sous forme de mélange vitreux, les proportions pondérales suivantes: 30% <= SiO2 <= 65%, 5% <= MnO <= 40%, 1% <= CaO <= 30%, 0% <= MgO <= 10%, 3% <= Al2O3 <= 25%, 0% <= Cr2O3 <=10%.

IPC 1-7

C21D 8/06; C22C 38/42

IPC 8 full level

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CPC (source: EP US)

C21D 8/065 (2013.01 - EP US); **C22C 38/42** (2013.01 - EP US); **D07B 1/066** (2013.01 - EP US); **D07B 2201/2009** (2013.01 - EP); **D07B 2205/3028** (2013.01 - EP US); **Y10S 428/923** (2013.01 - EP US); **Y10T 428/12431** (2015.01 - EP US); **Y10T 428/12438** (2015.01 - EP US); **Y10T 428/12493** (2015.01 - EP US); **Y10T 428/12771** (2015.01 - EP US); **Y10T 428/12778** (2015.01 - EP US); **Y10T 428/12861** (2015.01 - EP US); **Y10T 428/12924** (2015.01 - EP US)

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