

Title (en)

METHOD FOR PRODUCING WELDED STEEL PIPES WITH A HIGH DEGREE OF STRENGTH, DUCTILITY AND DEFORMABILITY

Title (de)

VERFAHREN ZUR HERSTELLUNG VON GESCHWEISSTEN STAHLROHREN HOHER FESTIGKEIT, ZÄHIGKEITS- UND VERFORMUNGSEIGENSCHAFTEN

Title (fr)

PROCEDE POUR PRODUIRE DES TUBES D'ACIER SOUDES PRESENTANT UNE RESISTANCE MECANIQUE, UNE TENACITE ET UNE APTITUDE A LA DEFORMATION ELEVEES

Publication

EP 1204772 B1 20070725 (DE)

Application

EP 00943586 A 20000510

Priority

- DE 0001513 W 20000510
- DE 19922542 A 19990510
- DE 10023488 A 20000509

Abstract (en)

[origin: WO0068443A2] The invention relates to a method for producing welded steel pipes with a high degree of strength, ductility and deformability, especially linepipes, according to the UOE-method. A pipe is moulded cold from a TM-rolled sheet, welded together and calibrated to the desired diameter. Starting with a sheet consisting of a steel with the following (in wt.%): 0.02 to 0.20 % carbon, 0.05 to 0.50 % silicon, 0.50 to 2.50 % manganese, 0.003 to 0.06 % aluminium, the remainder being iron with a few production-related impurities, after welding and calibration, the pipe is subjected to a heat treatment process at a temperature of 100-300 degrees Celsius and for a holding time that is appropriate for the thickness of the pipe wall, with subsequent cooling with air or by forced cooling. The resulting pipe is resistant to ageing and has a sufficiently integral deformation reserve against fracturing with the same high degree of strength, without exceeding the upper limit for the ratio of yield strength to tensile stress according to the current regulations for conventional steels.

IPC 8 full level

B21C 37/08 (2006.01); **C21D 8/00** (2006.01); **B21C 37/12** (2006.01); **C21D 1/26** (2006.01); **C21D 8/10** (2006.01); **C21D 9/08** (2006.01); **C21D 9/50** (2006.01); **C22C 38/00** (2006.01); **C22C 38/06** (2006.01); **C22C 38/58** (2006.01)

CPC (source: EP US)

C21D 1/26 (2013.01 - EP US); **C21D 8/10** (2013.01 - EP US); **C21D 9/08** (2013.01 - EP US)

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

WO 0068443 A2 20001116; **WO 0068443 A3 20010426**; CA 2373064 A1 20001116; CA 2373064 C 20081021; DE 50014515 D1 20070906; EP 1204772 A2 20020515; EP 1204772 B1 20070725; JP 2002544377 A 20021224; US 2002117538 A1 20020829; US 6648209 B2 20031118

DOCDB simple family (application)

DE 0001513 W 20000510; CA 2373064 A 20000510; DE 50014515 T 20000510; EP 00943586 A 20000510; JP 2000617212 A 20000510; US 3337901 A 20011113