

Title (en)

STEEL SHEET FOR CROWN CAPS, PRODUCTION METHOD THEREFOR, AND CROWN CAP

Title (de)

STAHLBLECH FÜR KRONKORKEN, HERSTELLUNGSVERFAHREN DAFÜR UND KRONKORKEN

Title (fr)

TÔLE D'ACIER POUR CAPSULE-COURONNE, PROCÉDÉ DE FABRICATION CORRESPONDANT, ET CAPSULE-COURONNE

Publication

EP 3476964 A4 20190522 (EN)

Application

EP 17855743 A 20170914

Priority

- JP 2016192247 A 20160929
- JP 2017033179 W 20170914

Abstract (en)

[origin: EP3476964A1] To provide a steel sheet for crown caps, having sufficient pressure resistance and formability regardless of gauge reduction; a method for manufacturing the same; and a crown cap. A steel sheet for crown caps has a predetermined composition, wherein N total-(N as AlN) is 0.0090% to 0.0170%, the maximum grain size of a carbide is 2.0 μm or less in a cross section in a rolling direction, and the yield strength is 420 MPa to 600 MPa in the rolling direction. A method for manufacturing a steel sheet for crown caps includes a hot rolling step of coiling a steel material having a predetermined composition at a predetermined temperature after finish rolling; a primary cold rolling step; a continuous annealing step of performing heating at an average heating rate of 10 $^{\circ}\text{C/s}$ to 30 $^{\circ}\text{C/s}$ in a temperature range A from 500 $^{\circ}\text{C}$ to 600 $^{\circ}\text{C}$ in a heating course, annealing at an annealing temperature B in a temperature range from 620 $^{\circ}\text{C}$ to 740 $^{\circ}\text{C}$, cooling from the annealing temperature B to a cooling stop temperature C in a temperature range from 400 $^{\circ}\text{C}$ to 580 $^{\circ}\text{C}$ at an average cooling rate of 20 $^{\circ}\text{C/s}$ or more, and retaining in the temperature range from 400 $^{\circ}\text{C}$ to 580 $^{\circ}\text{C}$ for a retention time of 30 seconds to 90 seconds after cooling at the above average cooling rate is stopped; and a secondary cold rolling step of performing cold rolling at a rolling reduction ratio of 1.0% to 12%.

IPC 8 full level

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CPC (source: EP)

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Citation (search report)

- [Y] EP 2253729 A1 20101124 - JFE STEEL CORP [JP]
- [Y] EP 1291447 A1 20030312 - KAWASAKI STEEL CO [JP]
- [A] JP H1072640 A 19980317 - KAWASAKI STEEL CO
- [A] JP 2016079505 A 20160516 - JFE STEEL CORP
- See references of WO 2018061787A1

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