

Title (en)

Process for preventing adhesion of steel band during annealing

Title (de)

Verfahren zum Vermeiden von Klebern beim Glühen von Kaltband

Title (fr)

Procédé pour éviter le collage de bande d'acier pendant le recuit

Publication

EP 0760396 B1 20020130 (DE)

Application

EP 96108286 A 19960524

Priority

DE 19531447 A 19950826

Abstract (en)

[origin: EP0760396A1] A method of preventing sticking during cold rolled strip annealing, involving heating up, holding and cooling, in a bell furnace, pref. with forced convection under a protective gas of more than 5% to 100% H₂ and balance N₂, involves covering the strip with a thin surface film during the holding period by oxidn. at above 600 degrees C, the oxidising partial pressure ratio pCO₂/pCO being adjusted to greater than 1 by addn. of 0.3-0.6 g. CO₂ per sq. m. strip surface to the protective gas and by strong disruption of the thermodynamic equilibrium of the homogeneous water gas reaction (K = much less than 0.01).

IPC 1-7

C21D 1/70

IPC 8 full level

C21D 1/68 (2006.01); **C21D 1/70** (2006.01); **C21D 1/76** (2006.01); **C21D 9/52** (2006.01); **C21D 9/67** (2006.01)

CPC (source: EP US)

C21D 1/70 (2013.01 - EP US); **C21D 9/67** (2013.01 - EP US); **C21D 1/76** (2013.01 - EP US)

Citation (examination)

- US 1815505 A 19310721 - GUTHRIE ROBERT G, et al
- FR 666903 A 19291008
- "Gas, Warme-international", Band 33 (1984), Heft 10, Oktober, Seiten 490-497.

Cited by

EP3575008A1; WO2019228985A1

Designated contracting state (EPC)

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US 5785773 A 19980728; AT E212678 T1 20020215; BR 9603545 A 19980519; CA 2183089 A1 19970227; CA 2183089 C 20061031; CZ 247996 A3 19970312; CZ 292244 B6 20030813; DE 19531447 A1 19970227; DE 59608666 D1 20020314; EP 0760396 A1 19970305; EP 0760396 B1 20020130; EP 0760396 B2 20050323; MX 9603468 A 19970731; SK 108896 A3 19970305; SK 282593 B6 20021008

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US 69992596 A 19960820; AT 96108286 T 19960524; BR 9603545 A 19960823; CA 2183089 A 19960809; CZ 247996 A 19960821; DE 19531447 A 19950826; DE 59608666 T 19960524; EP 96108286 A 19960524; MX 9603468 A 19960816; SK 108896 A 19960822