

Title (en)

Apparatus for cooling sheet metal strip

Title (de)

Vorrichtung zum Kühlen eines Blechbandes

Title (fr)

Dispositif de refroidissement d'une bande de tôle

Publication

EP 1624078 A1 20060208 (DE)

Application

EP 05450119 A 20050711

Priority

AT 13362004 A 20040804

Abstract (en)

Device for cooling a metal strip (1) comprises nozzles (6) forming a common jet surface (7) and covers (10) connected to the metal strip arranged laterally in the spraying region of the nozzles.

IPC 8 full level

C21D 9/573 (2006.01); **B05B 1/20** (2006.01); **B05B 7/08** (2006.01); **B05D 1/02** (2006.01); **B21B 45/02** (2006.01); **C21D 1/667** (2006.01)

CPC (source: EP US)

B21B 45/0218 (2013.01 - EP US); **C21D 1/667** (2013.01 - EP US); **C21D 9/573** (2013.01 - EP US); **C21D 9/5735** (2013.01 - EP US); **B21B 45/0233** (2013.01 - EP US)

Citation (applicant)

- EP 0695590 A1 19960207 - ALUSUISSE LONZA SERVICES AG [CH]
- DE 10207584 A1 20030911 - VITS MASCHB GMBH I INS [DE]

Citation (search report)

- [A] DE 19726890 A1 19990128 - KAMPF GMBH & CO MASCHF [DE]
- [DA] DE 10207584 A1 20030911 - VITS MASCHB GMBH I INS [DE]
- [A] US 6301906 B1 20011016 - THIEL HERMANN [DE], et al
- [A] US 4185648 A 19800129 - GERMAIN ALFRED M J [FR]
- [PA] PATENT ABSTRACTS OF JAPAN vol. 2003, no. 12 5 December 2003 (2003-12-05)

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Designated contracting state (EPC)

AT BE CH DE FR IT LI

DOCDB simple family (publication)

EP 1624078 A1 20060208; AT 414102 B 20060915; AT A13362004 A 20051215; JP 2006043773 A 20060216; US 2006027163 A1 20060209; US 7582251 B2 20090901

DOCDB simple family (application)

EP 05450119 A 20050711; AT 13362004 A 20040804; JP 2005225862 A 20050803; US 19185505 A 20050728