

Title (en)  
Device for cooling hot-rolled metal plates and strips

Title (de)  
Vorrichtung zum Kühlen von warmgewalzten Platten und Bändern aus Metall

Title (fr)  
Dispositif de refroidissement des tôles et des bandes laminées à chaud

Publication  
**EP 0695590 B1 19990303 (DE)**

Application  
**EP 95810449 A 19950707**

Priority  
CH 229794 A 19940720

Abstract (en)  
[origin: EP0695590A1] Hot rolled strip or plate is passed beneath banks of water spray nozzles (26) which each produce a spray pattern (30) on the surface of the strip. As the water leaves the nozzle it is subjected to lateral air or water spray beams (A, B) which periodically deflect the main spray back and forth across the width of the strip.

IPC 1-7  
**B21B 45/02; C21D 1/667; C21D 9/573; B05B 7/08**

IPC 8 full level  
**B05B 7/08 (2006.01); B21B 45/02 (2006.01); C21D 1/667 (2006.01); C21D 9/573 (2006.01); C22F 1/04 (2006.01)**

CPC (source: EP US)  
**B05B 7/0861 (2013.01 - EP US); B05B 7/0884 (2013.01 - EP US); B21B 45/0233 (2013.01 - EP US); C21D 1/667 (2013.01 - EP US); C21D 9/573 (2013.01 - EP US); C22F 1/04 (2013.01 - EP US)**

Cited by  
EP0839918A1; WO2017133867A1; US5902543A; DE102016102093B3; DE10207584A1; EP2535431A1; ITMI20111092A1; WO2023148771A1; US10676807B2; WO2017017150A1; US7582251B2; EP1624078A1

Designated contracting state (EPC)  
AT BE CH DE FR GB IT LI NL

DOCDB simple family (publication)  
**EP 0695590 A1 19960207; EP 0695590 B1 19990303**; AT E177031 T1 19990315; CA 2154044 A1 19960121; DE 59505170 D1 19990408; HU 9502139 D0 19950928; HU T72285 A 19960429; NO 311203 B1 20011029; NO 952845 D0 19950718; NO 952845 L 19960122; US 5640872 A 19970624

DOCDB simple family (application)  
**EP 95810449 A 19950707**; AT 95810449 T 19950707; CA 2154044 A 19950717; DE 59505170 T 19950707; HU 9502139 A 19950714; NO 952845 A 19950718; US 49533295 A 19950627