

Title (en)

METHOD AND APPARATUS FOR COOLING MATERIAL BY ATOMISED SPRAY

Title (de)

VERFAHREN UND VORRICHTUNG ZUR KÜHLUNG VON MATERIAL DURCH EIN ATOMSPRAY

Title (fr)

PROCÉDÉ ET APPAREIL DE REFROIDISSEMENT PAR JET PULVÉRISÉ

Publication

**EP 2443262 A1 20120425 (EN)**

Application

**EP 10754961 A 20100615**

Priority

- FI 2010050499 W 20100615
- FI 20095695 A 20090618

Abstract (en)

[origin: WO2011004061A1] The invention relates to a method and apparatus for tempering material. According to the invention, one or more liquids are atomized by at least one sprayer into droplets which are guided towards a surface of a hot material so that at least some of the droplets collide with the surface of the hot material and evaporate, thus removing thermal energy from the surface layer of the hot material. Impact members may be used to further reduce the size of the droplets. The droplets may be guided to the surface by a separate guiding gas flow.

IPC 8 full level

**C21D 1/667** (2006.01); **B05B 1/26** (2006.01); **B05B 7/06** (2006.01); **B05B 7/08** (2006.01); **C03B 27/02** (2006.01)

CPC (source: EP FI US)

**B05B 1/26** (2013.01 - EP US); **B05B 7/045** (2013.01 - EP US); **B05B 7/066** (2013.01 - FI); **B05B 7/0846** (2013.01 - FI); **C03B 27/02** (2013.01 - EP US); **C03B 27/024** (2013.01 - EP US); **C03B 27/028** (2013.01 - EP US); **C21D 1/667** (2013.01 - EP FI US)

Citation (search report)

See references of WO 2011004061A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)

**WO 2011004061 A1 20110113**; CN 102803520 A 20121128; CN 102803520 B 20141231; EP 2443262 A1 20120425; FI 125490 B 20151030; FI 20095695 A0 20090618; FI 20095695 A 20101219; JP 2012530189 A 20121129; TW 201105914 A 20110216; US 2012060536 A1 20120315

DOCDB simple family (application)

**FI 2010050499 W 20100615**; CN 201080026724 A 20100615; EP 10754961 A 20100615; FI 20095695 A 20090618; JP 2012515529 A 20100615; TW 99119402 A 20100615; US 201013320795 A 20100615