

Title (en)
COOLING SECTION COMPRISING POWER COOLING AND LAMINAR COOLING

Title (de)
KÜHLSTRECKE MIT POWER COOLING UND LAMINARKÜHLUNG

Title (fr)
SECTION DE REFROIDISSEMENT AVEC REFROIDISSEMENT INTENSIF ET REFROIDISSEMENT LAMINAIRE

Publication
EP 2956250 A1 20151223 (DE)

Application
EP 14705081 A 20140207

Priority
• EP 13155337 A 20130215
• EP 2014052388 W 20140207
• EP 14705081 A 20140207

Abstract (en)
[origin: EP2767353A1] The cooling section has working region (2) through which flat rolling stock (1) is guided. The working region is supplied with liquid coolant (4) by spray bars (3i). The liquid coolant is fed from reservoir (7) for liquid coolant to spray bars by pump (5) in supply system (6). The opening positions (si) of valves are set by control unit (10) based on respective sub-flow (fi) that is to be applied to stock by spray bar. The delivery rate (M) of pump and/or line pressure (p) generated by pump are set by control unit based on total flow (F) to be applied to rolling stock by all bars.

IPC 8 full level
B21B 45/02 (2006.01)

CPC (source: EP US)
B21B 37/74 (2013.01 - US); **B21B 45/0215** (2013.01 - US); **B21B 45/0218** (2013.01 - EP US); **B21B 45/0233** (2013.01 - US);
B21B 1/22 (2013.01 - US); **B21B 37/76** (2013.01 - US)

Citation (search report)
See references of WO 2014124868A1

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 RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 2767353 A1 20140820; BR 112015019431 A2 20170718; BR 112015019431 B1 20220719; CN 105163876 A 20151216;
CN 105163876 B 20171215; EP 2956250 A1 20151223; EP 2956250 B1 20221207; US 10076778 B2 20180918; US 11040385 B2 20210622;
US 2015375284 A1 20151231; US 2018345343 A1 20181206; WO 2014124868 A1 20140821

DOCDB simple family (application)
EP 13155337 A 20130215; BR 112015019431 A 20140207; CN 201480009116 A 20140207; EP 14705081 A 20140207;
EP 2014052388 W 20140207; US 201414768097 A 20140207; US 201816059125 A 20180809