

Title (en)

COOLING SECTION WITH ADJUSTMENT OF THE COOLING AGENT FLOW BY MEANS OF PUMPS

Title (de)

KÜHLSTRECKE MIT EINSTELLUNG DER KÜHLMITTELSTRÖME DURCH PUMPEN

Title (fr)

SECTION DE REFROIDISSEMENT À RÉGLAGE DE FLUX DE LIQUIDE DE REFROIDISSEMENT À L'AIDE DE POMPES

Publication

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Application

EP 19740415 A 20190723

Priority

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- EP 2019069763 W 20190723

Abstract (en)

[origin: WO2020020868A1] The invention relates to a cooling section (2) arranged within a rolling train or upstream or downstream of the rolling train. A hot-rolled product (1) made of metal is cooled by means of the cooling section (2). Application devices (6) of the cooling section (2) are supplied with a respective actual current (F) of a water-based liquid coolant (7) via a respective supply line (8) and a respective pump (10). The respective actual current (F) of the coolant (7) is applied to the hot-rolled product (1) by means of the respective application device (6). The hot-rolled product (1) is transported within the cooling section (2) in a horizontal transport direction (x) during the application of the coolant (7). A controller (11) of the cooling section (2) dynamically ascertains a respective target actuation state (S*) for each pump (10) on the basis of a respective target current (F*) of the coolant (7) to be applied onto the hot-rolled product (1) by means of the respective application device (6) and controls the respective pump (10) in a corresponding manner such that the respective actual current (F) delivered by each pump (10) approximates the respective target current (F*) as much as possible at any time.

IPC 8 full level

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Citation (opposition)

Opponent : SMS group GmbH

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- JP 2011218418 A 20111104 - SUMITOMO METAL IND
- EP 2767353 A1 20140820 - SIEMENS VAI METALS TECH GMBH [AT]
- WO 2014032838 A1 20140306 - SMS SIEMAG AG [DE]
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- PICHLER LUKAS, WEINZIERL KLAUS, SAMANTA SANDIP: "POWER COOLING AND MULTIPIC TECHNOLOGY FOR HOT ROLLED FLAT AND PLATE PRODUCTION", ANAIS DO SEMINÁRIO DE LAMINAÇÃO E CONFORMAÇÃO, EDITORA BLUCHER, SÃO PAULO, 1 September 2016 (2016-09-01) - 29 September 2016 (2016-09-29), São Paulo, pages 348 - 358, XP093137816, DOI: 10.5151/1983-4764-27900

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