Title (en)

ALUMINIUM SMELTER COMPRISING ELECTRICAL CONDUCTORS MADE FROM A SUPERCONDUCTING MATERIAL

Title (de)

ALUMINIUMSCHMELZER MIT ELEKTRISCHEN LEITERN AUS EINEM SUPRALEITERMATERIAL

Title (fr)

ALUMINERIE COMPRENANT DES CONDUCTEURS ELECTRIQUES EN MATERIAU SUPRACONDUCTEUR

Publication

EP 2732075 A2 20140521 (FR)

Application

EP 12748726 A 20120710

Priority

- FR 1102198 A 20110712
- FR 1102199 A 20110712
- FR 2012000282 W 20120710

Abstract (en)

[origin: WO2013007893A2] The invention relates to an aluminium smelter (1) comprising: (i) a series of electrolytic cells (2) intended for the production of aluminium, forming one or more rows (F); (ii) a power-feeding station (12) intended to supply the series of electrolytic cells (2) with electrolysis current (I1), said power-feeding station (12) comprising two poles; (iii) a main electric circuit (15) through which the electrolysis current (I1) flows, said circuit having two ends each connected to one of the poles of the power-feeding station (12); and (iv) at least one secondary electric circuit (16-17) comprising an electrical conductor made from a superconducting material, through which a current (I2, I3) flows, and extending alongside the row(s) (F) of electrolytic cells (2). The aluminium smelter is characterised in that the superconducting electrical conductor of the secondary electric circuit (16, 17) extends alongside the row(s) (F) of electrolytic cells (2) at least twice, thereby forming multiple turns in series.

IPC 8 full level

C25B 9/17 (2021.01); **C25C 3/08** (2006.01); **C25C 3/16** (2006.01); **C25C 3/20** (2006.01)

CPC (source: DK EP RU US)

C25C 3/00 (2013.01 - RU); **C25C 3/08** (2013.01 - DK EP US); **C25C 3/16** (2013.01 - DK EP US); **C25C 3/20** (2013.01 - DK EP US)

Citation (search report)

See references of WO 2013007893A2

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EP3996223A1; FR3115942A1; EP3996209A1; FR3116147A1

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

DOCDB simple family (publication)

WO 2013007893 A2 20130117; **WO 2013007893 A3 20130530**; AR 087122 A1 20140212; AR 087124 A1 20140212; AU 2012282373 A1 20140130; AU 2012282373 B2 20160929; AU 2012282374 A1 20140130; BR 112014000573 A2 20170214; BR 112014000573 B1 20200924; BR 112014000760 A2 20170214; CA 2841300 A1 20130117; CA 2841300 C 20190409; CA 2841847 A1 20130117; CN 103649375 A 20140319; CN 103687982 A 20140326; CN 103687982 B 20160511; DK 179966 B1 20191111; DK 201370794 A 20131219; EA 201490256 A1 20140430; EP 2732075 A2 20140521; EP 2732075 B1 20180314; EP 2732076 A2 20140521; IN 886CHN2014 A 20150403; MY 166183 A 20180607; NO 2732075 T3 20180811; NZ 619717 A 20151030; RU 2014104795 A 20150820; RU 2018140052 A 20200430; RU 2764623 C2 20220118; SI 2732075 T1 20180629; TR 201807790 T4 20180621; US 2014138241 A1 20140522; US 2014209457 A1 20140731; US 9598783 B2 20170321; WO 2013007894 A2 20130117; WO 2013007894 A3 20130328

DOCDB simple family (application)

FR 2012000282 W 20120710; AR P120102506 A 20120711; AR P120102508 A 20120711; AU 2012282373 A 20120710; AU 2012282374 A 20120710; BR 112014000573 A 20120710; BR 112014000760 A 20120710; CA 2841300 A 20120710; CA 2841847 A 20120710; CN 201280034611 A 20120710; CN 201280034686 A 20120710; DK PA201370794 A 20131219; EA 201490256 A 20120710; EP 12748726 A 20120710; EP 12748727 A 20120710; FR 2012000283 W 20120710; IN 886CHN2014 A 20140204; MY PI2014700059 A 20120710; NO 12748726 A 20120710; NZ 61971712 A 20120710; RU 2014104795 A 20120710; RU 2018140052 A 20120710; SI 201231308 T 20120710; TR 201807790 T 20120710; US 201214232125 A 20120710; US 201214232168 A 20120710