

Title (en)

ANODE SERVICING ASSEMBLY FOR AN ALUMINIUM ELECTROLYSIS PLANT, AND METHODS FOR OPERATING THE SAME

Title (de)

ANODENWARTUNGSANORDNUNG FÜR EINE ALUMINIUM-ELEKTROLYSEANLAGE UND VERFAHREN ZUM BETREIBEN DAFÜR

Title (fr)

ENSEMBLE D'ENTRETIEN D'ANODE POUR UNE INSTALLATION D'ÉLECTROLYSE D'ALUMINIUM ET SES PROCÉDÉS DE FONCTIONNEMENT

Publication

**EP 4293141 A1 20231220 (EN)**

Application

**EP 22178734 A 20220613**

Priority

EP 22178734 A 20220613

Abstract (en)

An anode servicing assembly (30, 35) for an aluminium electrolysis plant, said aluminium electrolysis plant comprising at least one line (L1, L2) of electrolysis cells (C1-Cn, C'1-C'n) connected in series, each cell having a plurality of anode assemblies (5) connected to an anode beam, said anode servicing assembly comprising:- an elongated body (31),- running means adapted to allow movement of said elongated body along a running direction, substantially parallel to main axis of said line (L1, L2),- an anode servicing machine (32) mounted on said elongated body, said anode servicing machine comprisingo at least two operating devices (45, 55, 65, 75, 85, 95), each adapted to fulfil at least one specific function different from cell lifting and anode beam raising,o at least two support assemblies (40, 50, 60, 62, 70, 72, 80, 81, 82, 83, 90, 91, 92, 93), each adapted to support a respective operating device with respect to said elongated body, said operating devices (45, 55, 65, 75, 85, 95) being movable independently the one with respect to the other, along at least one of a longitudinal axis (L31) of said elongated body (31) and a vertical axis (ZZ).

IPC 8 full level

**C25C 3/10** (2006.01)

CPC (source: EP)

**C25C 3/10** (2013.01); **C25C 3/125** (2013.01)

Citation (applicant)

- WO 2004079046 A2 20040916 - ECL [FR], et al
- US 8888156 B2 20141118 - DAVID STÉPHANE [FR]
- WO 2004101853 A2 20041125 - ECL [FR], et al
- US 8066856 B2 20111129 - VAN ACKER ALAIN [FR]
- WO 2005095676 A2 20051013 - ECL [FR], et al
- WO 2006010816 A2 20060202 - ECL [FR], et al
- US 2007205104 A1 20070906 - WARTELLE BENOIT [FR]
- US 8273223 B2 20120925 - VAN ACKER ALAIN [FR], et al
- WO 2010079266 A1 20100715 - ECL [FR], et al
- WO 2011130892 A1 20111027 - KMS MEDITECH INC [CN], et al
- US 2012234690 A1 20120920 - WATTEL ARNAUD [FR], et al
- US 2008251392 A1 20081016 - VAN ACKER ALAIN [FR]
- WO 2006030092 A2 20060323 - ECL [FR], et al
- WO 2016128631 A1 20160818 - FIVES ECL [FR]
- FR 3032457 A1 20160812 - ECL [FR]
- WO 2015132479 A2 20150911 - ECL [FR]
- N. DUPAS: ""Electrolysis pots anode changing automation: impact on process and safety performance", LIGHT METALS, 2009, pages 515 - 518
- J. GUERINA.G. HEQUET: "New ECL embedded service robot: Towards an automated, efficient and green smelter", LIGHT METALS (TMS, 2015, pages 695 - 697

Citation (search report)

- [X] US 2022136120 A1 20220505 - RENAUDIER STEEVE [FR], et al
- [X] EP 3084331 A1 20161026 - FIVES ECL [FR]
- [X] US 2011194916 A1 20110811 - WATTEL ARNAUD [FR], et al
- [A] GB 2013244 A 19790808 - ARDAL OG SUNNDAL VERK

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

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

**EP 4293141 A1 20231220**; WO 2023242730 A1 20231221

DOCDB simple family (application)

**EP 22178734 A 20220613**; IB 2023056086 W 20230613