

Title (en)
PROCESS AND APPARATUS FOR MONITORING THE SOLID ELECTROLYTE ADDITIONS TO ELECTROLYSIS VATS FOR THE PRODUCTION OF ALUMINIUM

Publication
EP 0288397 B1 19910724 (FR)

Application
EP 88420122 A 19880419

Priority
FR 8705874 A 19870421

Abstract (en)
[origin: US4857157A] Process and apparatus for controlling solid electrolyte additions to electrolytic cells for aluminum production. The invention relates to a process for controlling solid electrolyte additions to a cell for producing aluminum by the electrolysis of alumina dissolved in a molten cryolitic bath according to the Hall-Héroult process. According to this process a nominal value HBC is fixed for the bath height, the level of the bath in the cell is periodically determined on the basis of a fixed dimension point PF known relative to the carbon-containing cathode substrate, from it is deduced the total height HT of the electrolytic bath layer HB and the liquid aluminum layer HM, the thickness HM of the liquid aluminum layer on the cathode substrate is determined, from it is deduced the bath layer height HB, $HB=HT-HM$ and Hb is compared with the nominal value HBC. If this comparison reveals a bath deficiency, a ground bath addition is initiated from a storage means through at least one opening made in the solidified electrolyte crust normally covering the cell. If this comparison reveals a bath excess, an alarm is triggered in order to bring about a bath tapping operation.

IPC 1-7
C25C 3/20

IPC 8 full level
C25C 3/20 (2006.01)

CPC (source: EP US)
C25C 3/20 (2013.01 - EP US)

Cited by
CN105297076A; CN104480496A; EP0716165A1; FR2727985A1; AU689973B2

Designated contracting state (EPC)
DE ES GB GR NL

DOCDB simple family (publication)
EP 0288397 A1 19881026; EP 0288397 B1 19910724; AU 1478488 A 19881027; AU 603204 B2 19901108; BR 8801909 A 19881122; CA 1335436 C 19950502; CN 1019514 B 19921216; CN 88102179 A 19881123; DE 3863827 D1 19910829; ES 2024042 B3 19920216; FR 2614320 A1 19881028; FR 2614320 B1 19890630; GR 3002356 T3 19921230; HU 207540 B 19930428; HU T49656 A 19891030; IN 169735 B 19911214; IS 1432 B6 19900716; IS 3333 A7 19881022; MY 103264 A 19930529; NO 171419 B 19921130; NO 171419 C 19930310; NO 881705 D0 19880420; NO 881705 L 19881024; NZ 224238 A 19900226; OA 08833 A 19890331; SA 90100107 B1 20001014; SU 1597109 A3 19900930; US 4857157 A 19890815

DOCDB simple family (application)
EP 88420122 A 19880419; AU 1478488 A 19880420; BR 8801909 A 19880421; CA 564358 A 19880418; CN 88102179 A 19880420; DE 3863827 T 19880419; ES 88420122 T 19880419; FR 8705874 A 19870421; GR 900401161 T 19910725; HU 197988 A 19880418; IN 308CA1988 A 19880415; IS 3333 A 19880415; MY PI19880392 A 19880419; NO 881705 A 19880420; NZ 22423888 A 19880413; OA 59332 A 19880415; SA 90100107 A 19900219; SU 4355595 A 19880420; US 18249988 A 19880418