

Title (en)

INERT ALLOY ANODE USED FOR ALUMINUM ELECTROLYSIS AND PREPARATION METHOD THEREFOR

Title (de)

INERTE ANODE FÜR ALUMINIUMELEKTROLYSE UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

ANODE EN ALLIAGE INERTE UTILISÉE POUR L'ÉLECTROLYSE D'ALUMINIUM ET PROCÉDÉ DE PRÉPARATION ASSOCIÉ

Publication

EP 2860291 A1 20150415 (EN)

Application

EP 13803425 A 20130530

Priority

- CN 201210188424 A 20120611
- CN 201310024019 A 20130123
- CN 2013076441 W 20130530

Abstract (en)

The present invention discloses an inert alloy anode for aluminum electrolysis, which contains Fe and Cu as primary components and further contains Sn; addition of the metal Sn contributes to formation of an oxide film with strong oxidization resistance and stable structure on the surface of the inert alloy anode and to improvement of the corrosion resistance of the anode; on this basis, the inert alloy anode further contains Ni, Al and Y, addition of the metal Al can prevent the primary metal components from being oxidized, and addition of the metal Y can control alloy to present a desired crystal form in the preparation process to achieve the purpose of oxidization resistance. The inert alloy anode with Fe and Cu as primary components is low in overvoltage, high in electric conductivity, low in cost and applicable to aluminum electrolysis industry.

IPC 8 full level

C25C 3/12 (2006.01)

CPC (source: EP KR US)

B22D 25/00 (2013.01 - EP US); **C22C 9/00** (2013.01 - EP US); **C22C 9/06** (2013.01 - EP US); **C22C 19/03** (2013.01 - EP US); **C22C 30/02** (2013.01 - EP US); **C22C 30/04** (2013.01 - EP US); **C22C 38/005** (2013.01 - EP US); **C22C 38/008** (2013.01 - EP US); **C22C 38/06** (2013.01 - EP US); **C22C 38/08** (2013.01 - EP US); **C22C 38/16** (2013.01 - EP US); **C25C 3/12** (2013.01 - EP KR US); **C25C 7/025** (2013.01 - US)

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 2860291 A1 20150415; **EP 2860291 A4 20151209**; **EP 2860291 B1 20200108**; AP 2015008186 A0 20150131; AU 2013275996 A1 20150122; AU 2013275996 B2 20161027; CA 2876336 A1 20131219; CA 2876336 C 20170314; EA 030951 B1 20181031; EA 201492227 A1 20150529; IN 217DEN2015 A 20150612; KR 20150022994 A 20150304; US 2015159287 A1 20150611; WO 2013185539 A1 20131219; ZA 201409511 B 20160831

DOCDB simple family (application)

EP 13803425 A 20130530; AP 2015008186 A 20130530; AU 2013275996 A 20130530; CA 2876336 A 20130530; CN 2013076441 W 20130530; EA 201492227 A 20130530; IN 217DEN2015 A 20150109; KR 20157000520 A 20130530; US 201314407292 A 20130530; ZA 201409511 A 20141223