

Title (en)
METHOD FOR PRODUCING AN ALKALI METAL

Title (de)
VERFAHREN ZUR HERSTELLUNG EINES ALKALIMETALLS

Title (fr)
PROCÉDÉ DE PRÉPARATION D'UN MÉTAL ALCALIN

Publication
EP 2877614 A1 20150603 (DE)

Application
EP 13740265 A 20130722

Priority
• EP 12178306 A 20120727
• EP 2013065415 W 20130722
• EP 13740265 A 20130722

Abstract (en)
[origin: WO2014016247A1] Method for producing an alkali metal from a salt of the alkali metal soluble in a solvent, comprising the following steps: . (a) performing a first electrolysis in a first electrolysis cell (1) comprising an anode chamber (3) and a cathode chamber (5), wherein the anode chamber (3) and the cathode chamber (5) of the first electrolysis cell (1) are separated by a membrane (7) permeable to alkali metal cations, wherein the salt of the alkali metal dissolved in the solvent is supplied to the anode chamber (3), and a suspension containing sulphur and a second solvent is supplied to the cathode chamber (5), and a mixture containing a second solvent, alkali metal cations, (poly)sulphide anions and further ionic sulphur compounds is removed from the cathode chamber (5); . (b) concentrating the mixture containing the second solvent, alkali metal cations, (poly)sulphide anions and further ionic sulphur compounds that was removed from the cathode chamber to form a largely solvent-free alkali metal (poly)sulphide melt; and . (c) performing a second electrolysis at a temperature above the melting temperature of the alkali metal in a second electrolysis cell (71) comprising an anode chamber (73) and a cathode chamber, wherein the anode chamber (73) and the cathode chamber of the second electrolysis cell are separated by a solid-state electrolyte conducting alkali metal cations and the alkali metal and (poly)sulphide melt from step (b) is supplied to the anode chamber (73) and sulphur is removed from the anode chamber and liquid alkali metal is removed from the cathode chamber.

IPC 8 full level
C25C 3/02 (2006.01); **C25B 1/14** (2006.01)

CPC (source: CN EP)
C25B 1/00 (2013.01 - CN EP); **C25B 1/14** (2013.01 - CN EP); **C25B 15/08** (2013.01 - CN EP); **C25C 3/02** (2013.01 - CN EP); **C25C 7/005** (2013.01 - CN EP)

Citation (search report)
See references of WO 2014016247A1

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)
WO 2014016247 A1 20140130; BR 112015001713 A2 20170704; CA 2880255 A1 20140130; CN 104685105 A 20150603; EP 2877614 A1 20150603; JP 2015529745 A 20151008; TW 201413061 A 20140401

DOCDB simple family (application)
EP 2013065415 W 20130722; BR 112015001713 A 20130722; CA 2880255 A 20130722; CN 201380050282 A 20130722; EP 13740265 A 20130722; JP 2015523514 A 20130722; TW 102126982 A 20130726