

Title (en)
METHOD FOR THE PRODUCTION OF NICKEL OXIDE SURFACES HAVING INCREASED CONDUCTIVITY

Title (de)
VERFAHREN ZUR HERSTELLUNG VON NICKELOXIDOBERFLÄCHEN MIT ERHÖHTER LEITFÄHIGKEIT

Title (fr)
PROCEDE POUR PRODUIRE DES SURFACES D'OXYDE DE NICKEL A CONDUCTIVITE ACCRUE

Publication
EP 1771604 A2 20070411 (DE)

Application
EP 05772399 A 20050709

Priority
• EP 2005007464 W 20050709
• DE 102004034886 A 20040719

Abstract (en)
[origin: CA2574170A1] The invention relates to a method for producing electrically conducting nickel oxide surfaces made of nickel-containing material. According to said method, the nickel surface is first degreased and is then roughened for approximately ten minutes in a solution containing about one percent of hydrochloric acid, said process being accelerated by adding hydrogen peroxide solution, resulting in the electrolyte turning green. The nickel surface is briefly watered, the nickel material is introduced into a solution of 3.5 molar lye to which about ten percent of hydrogen peroxide is added and is kept therein for ten minutes, and the resulting nickel hydroxide surface is dehydrogenated in a subsequent thermal process and is then further oxidized to obtain nickel oxide. The invention further relates to a conductive boundary layer that is produced according to the said method, the electrodes therefrom, and the use thereof in chlor-alkali electrolysis processes, in fuel cells and accumulators.

IPC 8 full level
C25B 11/04 (2006.01); **H01M 4/48** (2010.01); **H01M 4/485** (2010.01); **H01M 4/52** (2010.01)

CPC (source: EP KR US)
C01G 53/04 (2013.01 - KR); **C25B 11/055** (2021.01 - EP US); **H01M 4/04** (2013.01 - KR); **H01M 4/32** (2013.01 - EP US);
H01M 4/485 (2013.01 - EP US); **H01M 4/52** (2013.01 - EP US); **H01M 4/8817** (2013.01 - EP US); **H01M 4/8882** (2013.01 - EP US);
H01M 4/90 (2013.01 - KR); **H01M 4/9016** (2013.01 - EP US); **Y02E 60/50** (2013.01 - EP)

Citation (search report)
See references of WO 2006008012A2

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
DE 102004034886 A1 20060216; BR PI0513480 A 20080506; CA 2574170 A1 20060126; CN 1997774 A 20070711; EP 1771604 A2 20070411;
JP 2008506845 A 20080306; JP 4746618 B2 20110810; KR 20070040794 A 20070417; RU 2007105880 A 20080827; RU 2383659 C2 20100310;
US 2008280204 A1 20081113; US 8057713 B2 20111115; WO 2006008012 A2 20060126; WO 2006008012 A3 20060622

DOCDB simple family (application)
DE 102004034886 A 20040719; BR PI0513480 A 20050709; CA 2574170 A 20050709; CN 200580024369 A 20050709;
EP 05772399 A 20050709; EP 2005007464 W 20050709; JP 2007521844 A 20050709; KR 20077001404 A 20070119;
RU 2007105880 A 20050709; US 63279005 A 20050709