Title (en)

PROCESS FOR THE PREPARATION OF FORMIC ACID BY REACTING CARBON DIOXIDE WITH HYDROGEN

Title (de)

VERFAHREN ZUR HERSTELLUNG VON AMEISENSÄURE DURCH UMSETZUNG VON KOHLENDIOXID MIT WASSERSTOFF

Title (fr)

PROCÉDÉ DE PRODUCTION D'ACIDE FORMIQUE PAR RÉACTION DE DIOXYDE DE CARBONE AVEC DE L'HYDROGÈNE

Publication

**EP 2729438 A1 20140514 (DE)**

Application

**EP 12730532 A 20120627**

Priority

- EP 11173130 A 20110707
- EP 2012062518 W 20120627
- EP 12730532 A 20120627

Abstract (en)

[origin: WO2013004577A1] Process for the preparation of formic acid by reacting carbon dioxide with hydrogen in a hydrogenation reactor in the presence of a catalyst comprising an element from the 8th, 9th or 10th group of the Periodic Table of the Elements, of a tertiary amine and of a polar solvent, with formation of formic acid-amine adducts, which are then cleaved thermally to give formic acid and tertiary amine.

IPC 8 full level

**C07C 51/02** (2006.01); **C07C 51/15** (2006.01)

CPC (source: CN EP)

**B01J 31/0202** (2013.01 - EP); **B01J 31/0237** (2013.01 - EP); **B01J 31/24** (2013.01 - EP); **B01J 31/2414** (2013.01 - EP); **C07C 51/00** (2013.01 - CN); **C07C 51/02** (2013.01 - CN EP); **C07C 51/41** (2013.01 - CN EP); B01J 2231/625 (2013.01 - EP); B01J 2531/821 (2013.01 - EP); B01J 2531/96 (2013.01 - EP); B01J 2531/98 (2013.01 - EP)

Citation (search report)

See references of WO 2013004577A1

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

DOCDB simple family (publication)

**WO 2013004577 A1 20130110**; BR 112013033528 A2 20170207; CA 2838907 A1 20130110; CN 103649036 A 20140319; EP 2729438 A1 20140514; JP 2014522823 A 20140908; KR 20140044891 A 20140415; RU 2014104137 A 20150820; ZA 201400863 B 20151223

DOCDB simple family (application)

**EP 2012062518 W 20120627**; BR 112013033528 A 20120627; CA 2838907 A 20120627; CN 201280033657 A 20120627; EP 12730532 A 20120627; JP 2014517690 A 20120627; KR 20147002909 A 20120627; RU 2014104137 A 20120627; ZA 201400863 A 20140205