

Title (en)
PROCESS FOR THE PREPARATION OF HYDROXYL AMMONIUM SALTS

Publication
EP 0000902 B1 19800723 (DE)

Application
EP 78100631 A 19780809

Priority
DE 2736872 A 19770816

Abstract (en)
[origin: US4192856A] Hydroxylammonium salts are manufactured by a process comprising the catalytic reduction of nitric oxide with hydrogen in a dilute aqueous solution of a mineral acid in the presence of a suspended platinum catalyst at an elevated temperature, wherein the reaction mixture is recycled and the gas mixture, containing nitric oxide and hydrogen, present in the gas space above the reaction zone, is introduced, by means of one or more downwardly directed jets of liquid, consisting of the recycled reaction mixture and issuing from a nozzle orifice, into one or more circulation zones which are present in the reaction zone, are open at both sides, extend in the direction of the entering jet of liquid and are completely covered by the reaction mixture, the reaction mixture leaving the bottom of the circulation zone and containing unconverted gases is deflected, passed upwards in the annular zone externally surrounding the circulation zone, and at the same time reaction mixture of low gas content is recycled from a separation zone located under the reaction zone.

IPC 1-7
C01B 21/14

IPC 8 full level
B01J 10/00 (2006.01); **B01J 19/24** (2006.01); **B01J 19/26** (2006.01); **B01J 23/00** (2006.01); **C01B 21/14** (2006.01)

CPC (source: EP US)
B01J 19/2465 (2013.01 - EP US); **B01J 19/26** (2013.01 - EP US); **C01B 21/1418** (2013.01 - EP US); **B01J 2219/00103** (2013.01 - EP US); **B01J 2219/0011** (2013.01 - EP US); **B01J 2219/00777** (2013.01 - EP US)

Cited by
EP0185868A3; EP0452574A1; EP0048974A1; US2020243991A1; WO2020014211A1

Designated contracting state (EPC)
BE CH DE FR GB NL

DOCDB simple family (publication)
EP 0000902 A1 19790307; **EP 0000902 B1 19800723**; DE 2736872 A1 19790222; DE 2736872 B2 19790719; DE 2860073 D1 19801113; IT 1097942 B 19850831; IT 7826690 A0 19780810; JP S5448700 A 19790417; US 4192856 A 19800311

DOCDB simple family (application)
EP 78100631 A 19780809; DE 2736872 A 19770816; DE 2860073 T 19780809; IT 2669078 A 19780810; JP 9673278 A 19780810; US 93263678 A 19780810