

Title (en)

Method and apparatus for ammonia synthesis at atmospheric pressure

Title (de)

Verfahren und Vorrichtung zur Ammoniaksynthese bei Atmosphärendruck

Title (fr)

Procédé et dispositif de synthèse d'ammoniac à pression atmosphérique

Publication

**EP 0972855 A1 20000119 (EN)**

Application

**EP 99600008 A 19990701**

Priority

GR 98100255 A 19980703

Abstract (en)

Prototype reactor and method for the ammonia synthesis at atmospheric pressure. This invention relates to the ammonia production from its elements (N<sub>2</sub> and H<sub>2</sub>) at atmospheric pressure. This was achieved in a solid state proton (H<sup>+</sup>) conducting cell - reactor. Hydrogen was flowing over the anode (6) and was converted into protons that were transported through the solid electrolyte (4) and reached the cathode (5)(Pd) over which nitrogen was passing. <IMAGE>

IPC 1-7

**C25B 1/00**

IPC 8 full level

**C25B 1/00** (2006.01)

CPC (source: EP)

**C25B 1/00** (2013.01)

Citation (search report)

- [X] EP 0480116 A1 19920415 - VAYENAS CONSTANTIN G [GR], et al
- [X] PATENT ABSTRACTS OF JAPAN vol. 097, no. 001 31 January 1997 (1997-01-31)
- [X] CHEMICAL ABSTRACTS, vol. 124, no. 26, 24 June 1996, Columbus, Ohio, US; abstract no. 347240, PANAGOS, E. ET AL: "Modeling of equilibrium limited hydrogenation reactions carried out in H<sup>+</sup> conducting solid oxide membrane reactors" XP002091039 & CHEM. ENG. SCI. (1996), 51(11), 3175-3180 CODEN: CESCAC;ISSN: 0009-2509, 1996
- [A] DATABASE WPI Section Ch Week 8803, Derwent World Patents Index; Class E36, AN 88-017141, XP002091040

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