

Title (en)
CRYOGENIC PROCESS FOR REMOVING NITROGEN FROM A DISCHARGE GAS

Title (de)
KRYOGENES VERFAHREN ZUR ENTFERNUNG VON STICKSTOFF AUS EINEM ENTLADUNGSGAS

Title (fr)
PROCÉDÉ CRYOGÉNIQUE DE DÉAZOTATION D'UN GAZ DE DÉCHARGE

Publication
EP 3727649 A1 20201028 (FR)

Application
EP 18839833 A 20181217

Priority
• FR 1762858 A 20171221
• FR 2018053338 W 20181217

Abstract (en)
[origin: WO2019122660A1] A process for producing biomethane (40) by purification of a biogas feed stream (1), comprising the following steps: Step a): introduction of the feed gas stream (1) into a pretreatment unit (5) in which said gas stream is partially separated from the CO₂ and the oxygen that it contains and is compressed at a pressure P₁ greater than 50 bar abs; Step b): the gas stream to be treated (22) resulting from step a), depleted of CO₂, is subjected to cryogenic separation by introducing it into a distillation column (26) in order to separate the nitrogen from said gas stream to be treated; Step c): a stream (27) enriched with CH₄ resulting from the cryogenic separation is recovered by pumping the bottom product (37) of said column (26) at a pressure P₂ greater than the critical pressure of said product, characterized in that said gas stream resulting from step a), depleted of CO₂, used in step b) comprises between 0.3 mol% and 2 mol% of CO₂.

IPC 8 full level
B01D 53/22 (2006.01); **B01D 53/04** (2006.01); **B01D 53/047** (2006.01); **F25J 3/02** (2006.01)

CPC (source: EP KR US)
B01D 53/0462 (2013.01 - EP KR); **B01D 53/047** (2013.01 - EP KR); **B01D 53/225** (2013.01 - EP KR); **B01D 53/229** (2013.01 - EP KR); **F25J 3/0209** (2013.01 - EP KR US); **F25J 3/0233** (2013.01 - EP KR US); **F25J 3/0257** (2013.01 - EP KR US); **F25J 3/0266** (2013.01 - US); **B01D 2256/245** (2013.01 - EP KR); **B01D 2257/102** (2013.01 - EP KR); **B01D 2257/104** (2013.01 - EP KR); **B01D 2257/30** (2013.01 - EP KR); **B01D 2257/504** (2013.01 - EP KR); **B01D 2257/708** (2013.01 - EP KR); **B01D 2257/80** (2013.01 - EP KR); **B01D 2258/05** (2013.01 - EP KR); **B01D 2259/416** (2013.01 - EP KR); **F25J 2200/02** (2013.01 - EP KR); **F25J 2200/04** (2013.01 - US); **F25J 2200/72** (2013.01 - EP KR US); **F25J 2205/60** (2013.01 - EP KR); **F25J 2205/80** (2013.01 - EP KR); **F25J 2210/04** (2013.01 - EP KR); **F25J 2210/42** (2013.01 - EP KR US); **F25J 2210/66** (2013.01 - EP KR US); **F25J 2210/80** (2013.01 - US); **F25J 2220/60** (2013.01 - EP KR); **F25J 2220/62** (2013.01 - EP KR US); **F25J 2220/66** (2013.01 - EP KR); **F25J 2230/30** (2013.01 - EP KR US); **F25J 2235/60** (2013.01 - EP KR US); **F25J 2270/42** (2013.01 - EP KR); **F25J 2270/60** (2013.01 - EP KR); **F25J 2290/90** (2013.01 - EP KR); **Y02C 20/40** (2020.08 - EP); **Y02E 50/30** (2013.01 - EP)

Citation (search report)
See references of WO 2019122660A1

Designated contracting state (EPC)
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Designated extension state (EPC)
BA ME

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