

Title (en)

METHOD AND SYSTEM FOR PRODUCING A GAS PRODUCT CONTAINING CARBON MONOXIDE

Title (de)

VERFAHREN UND ANLAGE ZUR HERSTELLUNG EINES KOHLENMONOXID ENTHALTENDEN GASPRODUKTS

Title (fr)

PROCÉDÉ ET INSTALLATION POUR LA PRÉPARATION D'UN PRODUIT GAZEUX CONTENANT DU MONOXYDE DE CARBONE

Publication

**EP 3638827 A1 20200422 (DE)**

Application

**EP 18729866 A 20180530**

Priority

- DE 102017005680 A 20170614
- EP 2018000278 W 20180530

Abstract (en)

[origin: WO2018228716A1] The invention relates to a method (100-500) for producing a gas product containing at least carbon monoxide, in which method at least carbon dioxide is subjected to an electrolysis process (10) in order to obtain a raw gas (A) containing at least carbon monoxide and carbon dioxide and the carbon dioxide contained in the raw gas (A) is partially or completely fed back to the electrolysis process (10). According to the invention, the raw gas (A) is partially or completely subjected to a membrane separation process (20) in order to obtain a retentate mixture (B) and a permeate mixture (C), which is enriched in carbon dioxide in comparison with the raw gas (A), and that the retentate mixture (B) is partially or completely subjected to a pressure swing adsorption process (40) in order to obtain the gas product (D), which is enriched in carbon monoxide and depleted of carbon dioxide in comparison with the retentate mixture (B), and a residual mixture (E), which is depleted of carbon monoxide and enriched in carbon dioxide in comparison with the retentate mixture (B). The invention further relates to a corresponding system.

IPC 8 full level

**B01D 53/02** (2006.01); **B01D 53/22** (2006.01); **C01B 32/40** (2017.01); **C25B 9/23** (2021.01); **C25B 15/08** (2006.01)

CPC (source: EP US)

**B01D 53/047** (2013.01 - EP US); **B01D 53/229** (2013.01 - EP US); **C01B 32/40** (2017.07 - US); **C25B 1/00** (2013.01 - EP US); **C25B 15/08** (2013.01 - EP); **B01D 53/226** (2013.01 - EP); **B01D 2256/20** (2013.01 - US); **B01D 2257/504** (2013.01 - EP US); **B01D 2259/40007** (2013.01 - US)

Citation (search report)

See references of WO 2018228716A1

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**WO 2018228716 A1 20181220**; CA 3065571 A1 20181220; CN 110770369 A 20200207; DE 102017005680 A1 20181220; EP 3638827 A1 20200422; JP 2020524212 A 20200813; US 2020131647 A1 20200430

DOCDB simple family (application)

**EP 2018000278 W 20180530**; CA 3065571 A 20180530; CN 201880035739 A 20180530; DE 102017005680 A 20170614; EP 18729866 A 20180530; JP 2019565909 A 20180530; US 201816621139 A 20180530