

Title (en)

PLANT AND METHOD FOR OBTAINING LIQUID METHANE FROM A METHANE-CONTAINING MIXTURE

Title (de)

ANLAGE UND VERFAHREN ZUR GEWINNUNG VON FLÜSSIGEM METHAN VON EINEM METHANHALTIGEN GEMISCH

Title (fr)

INSTALLATION ET PROCÉDÉ DE RÉCUPÉRATION DU MÉTHANE LIQUIDE À PARTIR D'UN MÉLANGE CONTENANT DU MÉTHANE

Publication

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Application

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Abstract (en)

Plant for obtaining liquid methane from a methane-containing mixture, said plant comprising a separation zone (100) in which the methane, contained in a gas flow (F1) coming from a source of gas mixture is separated from the other gases (F2, F3) forming said gas flow (F1), wherein it comprises a liquefaction station (200, 300) configured to obtain liquefaction of at least one component (F2, F3) of the gas flow (F1) obtained from said separation, wherein said liquefaction station (200, 300) operates at low temperature, and wherein said component (F3) to be liquefied comprises methane. The invention further provides a method for obtaining liquid methane by using said plant.

IPC 8 full level

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Citation (search report)

- [X] US 5642630 A 19970701 - ABDELMALEK FAWZY T [US], et al
- [Y] US 2018142176 A1 20180524 - KAO TZE-MING [TW], et al
- [XYI] BARELLI L. ET AL: "Dehydration and low temperature separation technologies for liquified natural gas production via electrolysis: A systematic review", JOURNAL OF ENERGY STORAGE, vol. 30, 1 August 2020 (2020-08-01), NL, pages 101471, XP055779960, ISSN: 2352-152X, DOI: 10.1016/j.est.2020.101471
- [X] FAN Q H ET AL: "Scheme Design and Analysis on Biogas Liquefaction System", 2009 INTERNATIONAL CONFERENCE ON ENERGY AND ENVIRONMENT TECHNOLOGY : ICEET 2009 ; GUILIN, CHINA, 16 - 18 OCTOBER 2009, IEEE, PISCATAWAY, NJ, USA, 16 October 2009 (2009-10-16), pages 810 - 813, XP031587304, ISBN: 978-0-7695-3819-8
- [XY] GHORBANI BAHRAM ET AL: "Energy, exergy and sensitivity analyses of a novel hybrid structure for generation of Bio-Liquefied natural Gas, desalinated water and power using solar photovoltaic and geothermal source", ENERGY CONVERSION AND MANAGEMENT, ELSEVIER SCIENCE PUBLISHERS, OXFORD, GB, vol. 222, 28 July 2020 (2020-07-28), XP086256271, ISSN: 0196-8904, [retrieved on 20200728], DOI: 10.1016/J.ENCONMAN.2020.113215
- [A] XIAO YONG ET AL: "CO₂ Removal from Biogas by Water Washing System", vol. 22, no. 8, 1 August 2014 (2014-08-01), CN, pages 950 - 953, XP055816043, ISSN: 1004-9541, Retrieved from the Internet <URL:<http://dx.doi.org/10.1016/j.cjche.2014.06.001>> DOI: 10.1016/j.cjche.2014.06.001

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