

Title (en)

A PROCESS FOR THE SEPARATION OF A GASEOUS MIXTURE AND AN APPARATUS FOR CARRYING OUT THE SAME

Title (de)

VERFAHREN ZUR TRENNUNG EINER GASFÖRMIGEN MISCHUNG UND VORRICHTUNG ZUR AUSFÜHRUNG DIESES VERFAHRENS

Title (fr)

PROCÉDÉ DE SÉPARATION D'UN MÉLANGE GAZEUX ET APPAREIL POUR LA MISE EN OEUVRE DUDIT PROCÉDÉ

Publication

EP 2576011 A2 20130410 (EN)

Application

EP 11764670 A 20110513

Priority

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- CZ 2011000051 W 20110513

Abstract (en)

[origin: WO2011150898A2] A process for the separation of a gaseous mixture, which is different from biogas, to form two streams of which one is depleted and the other is enriched in at least one component of said gasous mixture, which comprises introducing said gaseous mixture to one side of a liquid membrane having higher affinity to at least one component of said gaseous mixture, said liquid membrane being immobilized in a porous support having good affinity to the membrane forming liquid, wherein the first stream is obtained as a retentate and the second stream is obtained as a permeate, wherein any losses of said liquid from said membrane, which are caused by driving away said liquid in said permeate stream, are compensated by saturating said introduced gaseous mixture with the vapour of said liquid at a temperature which is higher than the temperature at which said membrane separation takes place whereupon said vapour is condensed when said gaseous mixture is cooled in said membrane. An apparatus for carrying said process which comprises a membrane separator (6), which is divided by a liquid membrane immobilized in a porous support (10), into a retentate space (6a) and a permeate space (6b), said retentate space (6a) being connected with supply fittings (1, 3, 5, 11) for said gaseous mixture and discharge fittings (13, 7, 9) for said retentate stream whereas said permeate space is connected with discharge fittings (8, 14) for said permeate stream. A saturator (5) for saturating said gaseous mixture with said vapour of the used liquid is inserted into the supply tubing (11) for said introduced gaseous mixture.

IPC 8 full level

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