

Title (en)

Process for the removal of water and naphtha from a gas, consisting of two additional steps of solvent regeneration

Title (de)

Verfahren zur Entfernung von Wasser und Benzin aus einem Gas, unter Verwendung von zwei additionellen Lösungsmittelregenerierungsstufen

Title (fr)

Procédé de déshydratation et de dégazolinage d'un gaz, comportant deux étapes complémentaires de régénération du solvant

Publication

EP 0831142 B1 20021211 (FR)

Application

EP 97402177 A 19970918

Priority

FR 9611694 A 19960924

Abstract (en)

[origin: EP0831142A1] The treatment of a gas containing methane and water and at least one hydrocarbon higher than methane to remove these impurities comprises: (a) separation of the gas to be treated into separate flows (1, 2); (b) contact of flow (2) with a recycled liquid phase containing water and a solvent, where the solvent comprises a non-hydrocarbon liquid organic compound, at least partially miscible with water and distillable at a lower temperature, to give a liquid aqueous phase depleted in solvent (compared to the recycled fluid) and a gaseous phase charged with solvent; (c) separation of the two phases; (d) contacting the solvent-depleted liquid phase with the gas flow (1), free of solvent, in a contact zone (G1), the solvent being extracted from this phase by the gas, providing a gaseous phase rich in solvent and an aqueous regenerated liquid; (e) mixing the gaseous phase from (d) either with the solvent-charged gaseous phase from (b) or with the gas flow (2), free of solvent, of stage (a); (f) cooling the gaseous mixture to partially condense out an aqueous phase and hydrocarbon phase, both containing solvent, and producing the treated gas free from water and hydrocarbons; (g) separating the phases from (f); and (h) recycling the solvent-enriched aqueous phase to step (b).

IPC 1-7

C10L 3/10

IPC 8 full level

C10G 5/06 (2006.01); **B01D 53/26** (2006.01); **C10G 5/04** (2006.01); **C10L 3/10** (2006.01)

CPC (source: EP US)

C10G 5/04 (2013.01 - EP US); **C10L 3/10** (2013.01 - EP US)

Cited by

GB2326423B; FR3106136A1; US11624032B2

Designated contracting state (EPC)

DE DK GB IT

DOCDB simple family (publication)

EP 0831142 A1 19980325; **EP 0831142 B1 20021211**; CA 2215157 A1 19980324; CA 2215157 C 20071127; CN 1085645 C 20020529; CN 1186797 A 19980708; DE 69717747 D1 20030123; DE 69717747 T2 20030528; DK 0831142 T3 20030106; FR 2753719 A1 19980327; FR 2753719 B1 19981127; JP H10102076 A 19980421; NO 315696 B1 20031013; NO 974396 D0 19970923; NO 974396 L 19980325; RU 2179569 C2 20020220; SA 97180476 B1 20060404; US 5868005 A 19990209

DOCDB simple family (application)

EP 97402177 A 19970918; CA 2215157 A 19970923; CN 97121414 A 19970924; DE 69717747 T 19970918; DK 97402177 T 19970918; FR 9611694 A 19960924; JP 25872597 A 19970924; NO 974396 A 19970923; RU 97116008 A 19970923; SA 97180476 A 19971008; US 93609797 A 19970923