

Title (en)
PLANT AND METHOD FOR SEPARATING LIQUIFIED PETROLEUM GAS FROM FUEL GAS BY CRYOGENIC DISTILLATION

Title (de)
ANLAGE UND VERFAHREN ZUR ABTRENNUNG VON FLÜSSIGGAS AUS BRENNGAS DURCH KRYOGENE DESTILLATION

Title (fr)
INSTALLATION ET PROCÉDÉ DE SÉPARATION DE GAZ DE PÉTROLE LIQUÉFIÉ À PARTIR DE GAZ COMBUSTIBLE PAR DISTILLATION CRYOGÉNIQUE

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Abstract (en)
The present invention relates to a plant for separating a feed composition comprising methane and C₂-hydrocarbons into a methane depleted fraction as product composition and into a methane enriched fraction, in particular for separating liquified petroleum gas from fuel gas, wherein the plant comprises: a) a distillation column comprising an inlet line, an overheads outlet line for the methane enriched fraction and a bottom outlet line for the methane depleted fraction, b) a condenser for condensing a portion of the methane enriched fraction so as to produce a mixed-phase effluent comprising a condensed phase and a vapor phase, wherein the condenser is directly or indirectly connected with the overheads outlet line of the distillation column, c) a gas-liquid separator for the partially condensed methane enriched fraction being connected with the condenser, wherein the gas-liquid separator comprises an outlet line for gas and an outlet line for liquid, wherein the outlet line for liquid is connected with the distillation column, and d) a turboexpander being connected with the outlet line for gas of the gas-liquid separator and comprising an outlet line for expanded gas, wherein the outlet line for expanded gas is directly or indirectly connected with the condenser so as to cool the methane enriched fraction within the condenser using the expanded gas as cooling agent, wherein the condenser further comprises an outlet line for withdrawing the expanded gas from the condenser.

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