

Title (en)
METHOD AND SYSTEM FOR SEPARATING A FEED FLOW

Title (de)
VERFAHREN UND EINE ANLAGE ZUR AUFTRENNUNG EINES EINSATZSTROMS

Title (fr)
MÉTHODE ET SYSTÈME SERVANT À SÉPARER UN FLUX D'ALIMENTATION

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Application
EP 21737559 A 20210622

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Abstract (en)
[origin: CA3184670A1] The invention relates to a method and a system (100) for separating a feed flow (1) which contains at least hydrogen and a hydrocarbon with three or four carbon atoms per molecule, in particular propane, propylene, propadiene, butane, 1-butene, 2-butene, and/or 1,3-butadiene. The condensed feed flow (1) is cooled over multiple cooling steps in at least two heat exchangers (120, 130) and is then separated into a condensate (7, 8, 9) and a residual gas flow (3, 5, 11) after each cooling step. The at least two heat exchangers (120, 130) are operated at at least two different temperature levels, wherein a hot heat exchanger (120) is operated at an average temperature level, and a cold heat exchanger (130) is operated at a lower temperature level. An internal refrigerant (15), which is made of a part (13) of one of the condensate flows (7, 8, 9) and a part (14) of one of the residual gas flows (3, 5, 11), is used to dispense a part of the heat from the cold heat exchanger (130).

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