

Title (en)  
Method for liquefying natural gas.

Title (de)  
Verfahren zur Verflüssigung von Erdgas.

Title (fr)  
Procédé de liquéfaction de gaz naturel.

Publication  
**EP 0535752 A1 19930407 (FR)**

Application  
**EP 92203009 A 19920930**

Priority  
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Abstract (en)  
Method for liquefying natural gas, comprising a prior stage of fractionating the gas. <??>The gas (1) is cooled and separated into a liquid phase (6) and a gaseous phase (8). The latter is reduced in pressure (9) and combined with the liquid phase in the column (7). The gas enriched in methane is separated at the head (21), and is recompressed (27) and sent for liquefaction (32, 33, 34). The liquid phase from the bottom of the column (7) is reduced in pressure and rectified in the column (14); the outflow from the head (19) is condensed (20) and returned as reflux (25) to the column (7). The pressure in the column (7) is greater than that in the column (14). The C3+ hydrocarbons are separated at the bottom (16). The liquefaction of the methane (33, 34) is conventional. <??>Use for producing liquid methane for land or sea transportation. <IMAGE>

Abstract (fr)  
Procédé de liquéfaction de gaz naturel comportant une étape préalable de fractionnement du gaz. Le gaz (1) est refroidi et séparé en phase liquide (6) et phase gazeuse (8). Cette dernière est détendue (9) et jointe à la phase liquide dans la colonne (7). En tête on sépare le gaz enrichi en méthane (21) qui est recomprimé (27) et envoyé à la liquéfaction (32, 33, 34). La phase liquide de fond de colonne (7) est détendue et rectifiée dans la colonne (14); l'effluent de tête (19) est condensé (20) et renvoyé comme reflux (25) à la colonne (7). La pression dans la colonne (7) est supérieure à celle de la colonne (14). On sépare les hydrocarbures C3+ en fond (16). La liquéfaction du méthane (33, 34) est conventionnelle. Utilisation pour la production de méthane liquide à transporter par voie de terre ou de mer. <IMAGE>

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• [AD] EP 0178207 A1 19860416 - TECHNIP CIE [FR]  
• [A] US 4657571 A 19870414 - GAZZI LUIGI [IT]  
• [A] FR 2128674 A1 19721020 - LINDE AG

Cited by  
FR3056223A1; EP0988497A4; EP4045859A4; WO2021076881A1; US9086188B2; WO2018055264A1; US7644676B2; US7841288B2; US8028724B2; US8820096B2; US8943841B2; US10352499B2; US10508769B2; US11168837B2

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