

Title (en)
Use of a two-phase turbine in a hydrotreating process

Title (de)
Anwendung einer Zweiphasenturbine in einem Hydrobehandlungsverfahren

Title (fr)
Utilisation d'une turbine diphasique dans un procédé d'hydrotraitement

Publication
EP 1505250 A1 20050209 (FR)

Application
EP 04291934 A 20040728

Priority
FR 0309620 A 20030804

Abstract (en)
A fluid with a liquid proportion greater than or equal to 95% at a pressure P1 is expanded across a single-phase turbine to obtain a fluid with a liquid proportion less than or equal to 5% at a pressure P2. The second fluid is expanded again through a two- phase turbine to obtain a fluid at pressure P3. The two-phase turbine is a rotodynamic turbine. The single phase and two-phase turbines form a single machine with at least one single phase impulsor and distributor and at least one two-phase impulsor and distributor. The turbines, impulsors and distributors share a common shaft. Before the first expansion, part of the high pressure fluid is taken and expanded in a first device, then the rest of the fluid is expanded in a second device before entering the single-phase turbine. The low pressure fluid from the two- phase turbine is expanded in a third device. The first, second and third devices are expansion valves or turbines.

Abstract (fr)
Après passage dans la section de réaction R, la charge d'hydrocarbure C mélangée à l'hydrogène H est détendue dans le dispositif D. La détente est effectuée par une turbine monophasique jusqu'à atteindre un taux volumique de gaz de 5%, puis la détente est effectuée dans une turbine diphasique de type rotodynamique. <IMAGE>

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IPC 8 full level
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CPC (source: EP US)
C10G 45/00 (2013.01 - EP US); **C10G 47/00** (2013.01 - EP US); **F04D 31/00** (2013.01 - EP US)

Citation (search report)
• [A] GB 2346936 A 20000823 - KVAERNER OIL & GAS AS [NO]
• [A] EP 1041243 A2 20001004 - ATLANTIC RICHFIELD CO [US]
• [AD] FR 2333139 A1 19770624 - INST FRANCAIS DU PETROLE [FR]
• [AD] FR 2665224 A1 19920131 - INST FRANCAIS DU PETROLE [FR]

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