

Title (en)  
PROCESS AND PLANT FOR THE HYDROLYSIS OF HEAVY HYDROCARBONS BY A PLASMA BEAM, IN PARTICULAR A H<sub>2</sub>/CH<sub>4</sub> PLASMA

Publication  
**EP 0316234 B1 19920603 (FR)**

Application  
**EP 88402817 A 19881109**

Priority  
FR 8715546 A 19871110

Abstract (en)  
[origin: EP0316234A1] The plant enabling this process to be carried out comprises: - a plasma torch (100) for producing and ejecting a jet of plasma under pressure, produced from a plasma-forming gas (210), generating free H<.> radicals, - an intermediate stage (200) comprising means for injecting into this plasma jet a gas (220) generating free radicals, especially H<.>, CH<.>, CH<sub>2</sub><.> and CH<sub>3</sub><.> radicals, - a venturi (310,320) at the constriction of which the hydrocarbons (320) are injected into the resulting downstream gas stream, - means (400,500) for collecting, downstream, the hydrolysis products. The venturi, in particular, makes it possible to ensure an excellent mixing of the two reactive phases, a sufficient cooling of the plasma avoiding coking and, owing to the acceleration of the flow which it provides, a slowing down of the recombination reactions of the free radicals. <IMAGE>

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**B01J 12/00; C10G 15/12**

IPC 8 full level  
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CPC (source: EP)  
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Cited by  
US6800336B1; CN113247881A; NL1010288C2; EP0370910A1; FR2639354A1; US5026949A; WO0021911A1

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