

Title (en)

Process for inhibiting or retarding the formation of hydrates in a production effluent

Title (de)

Verfahren zur Hemmung oder Verzögerung der Formation von Hydraten in einem Produktionsabfluss

Title (fr)

Procédé pour inhiber ou retarder la formation ou l'agglomération d'hydrates dans un effluent de production

Publication

**EP 0807678 B1 20050907 (FR)**

Application

**EP 97401004 A 19970505**

Priority

FR 9606200 A 19960515

Abstract (en)

[origin: EP0807678A1] The inhibition or retardation of the formation, growth and/or agglomeration of hydrates in the body of a fluid comprising water and a gas, such as natural gas, petroleum or other gases comprises the incorporation of a water soluble homo- or co-polymer derived from a nitrogenous polymer which may be a cationic, amphoteric or neutral monomer chosen from: (i) a monomer (A) of general formula  $R'-C(CH_2)-R''-R_1-N-R_2(R_3)$  (I), where:  $R' = H$  or  $Me$ ;  $R'' = -COO-$ ,  $-CO-NH-$ ,  $-CO-NH-CO-NH-$ , or  $-C_6H_4-$ ;  $R_1 = -(CH_2)_n$ , where  $n = 1-3$ ,  $-C(CH_3)_2$ ,  $-C(CH_3)_2-(CH_2)_2-$  or  $-CH_2-CH(OH)-CH_2-$ ;  $R_2 = H$ ,  $Me$ ,  $Et$  or  $i-Pr$ ; and  $R_3 = H$ ,  $Me$  or  $Et$ ; (ii) a monomer (B) of general formula  $R'-C(CH_2)-C(O)-NH-R_4$  (II), where:  $R' = H$  or  $Me$ ; and  $R_4 = -C(CH_3)_2-CH_2-$ ,  $CO-CH_3$  or  $-CH_2OH$ ; (iii) a monomer (C) of general formula (IIIa) or (IIIb), where:  $R_1 = H$  or  $Me$ ; (iv) a monomer (D) of formula (IV), where:  $R' = H$  or  $Me$ ; and (v) a monomer (E) of general formula  $(CH_2=CH-(CH_2))_2-NR_5$  (V), where:  $R_5 = C_nH_{2n+1}$ , with  $n = 1-10$ ,  $OH$  or  $(CH_2)_2-CO-NH_2$ .

IPC 1-7

**C10L 3/00**

IPC 8 full level

**C07C 7/20** (2006.01); **C10L 3/00** (2006.01)

CPC (source: EP US)

**C10L 3/00** (2013.01 - EP US)

Cited by

FR2767067A1

Designated contracting state (EPC)

GB IT NL

DOCDB simple family (publication)

**EP 0807678 A1 19971119**; **EP 0807678 B1 20050907**; AR 007156 A1 19991013; BR 9703143 A 19980908; CA 2206918 A1 19971115; CA 2206918 C 20080219; CN 1072709 C 20011010; CN 1172848 A 19980211; FR 2748773 A1 19971121; FR 2748773 B1 19980626; MX 9703503 A 19980430; NO 321773 B1 20060703; NO 972225 D0 19970514; NO 972225 L 19971117; RU 2167846 C2 20010527; US 5981816 A 19991109

DOCDB simple family (application)

**EP 97401004 A 19970505**; AR P970102050 A 19970515; BR 9703143 A 19970513; CA 2206918 A 19970514; CN 97113227 A 19970515; FR 9606200 A 19960515; MX 9703503 A 19970513; NO 972225 A 19970514; RU 97107763 A 19970514; US 85704897 A 19970515