

Title (en)  
Oil and gas recovery articles

Title (de)  
Öl und Gasgewinnungsartikel

Title (fr)  
Articles de récupération de pétrole et de gaz

Publication  
**EP 2851387 A1 20150325 (EN)**

Application  
**EP 13185207 A 20130919**

Priority  
EP 13185207 A 20130919

Abstract (en)  
An oil and gas recovery article comprising at least one part made of a poly(arylether sulfone) polymeric material comprising at least one poly(arylether sulfone) polymer, wherein said (t-PAES) polymer comprising more than 50 % moles of recurring units (R t ) of formula (S t ) : E-Ar 1 - SO 2 -(Ar 2 -(T-Ar 3 ) n -SO 2 ) m -Ar 4 wherein n and m, equal to or different from each other, are independently zero or an integer of 1 to 5, each of Ar 1 , Ar 2 , Ar 3 and Ar 4 equal to or different from each other and at each occurrence, is an aromatic moiety, T is a bond or a divalent group and E is of formula (E t ) : wherein each of R', equal to or different from each other, is selected from the group consisting of halogen, alkyl, alkenyl, alkynyl, aryl, ether, thioether, carboxylic acid, ester, amide, imide, alkali or alkaline earth metal sulfonate, alkyl sulfonate, alkali or alkaline earth metal phosphonate, alkyl phosphonate, amine and quaternary ammonium ; j' is zero or is an integer from 1 to 4.

IPC 8 full level  
**C08G 75/23** (2006.01); **E21B 1/00** (2006.01); **E21B 33/12** (2006.01); **E21B 34/00** (2006.01); **E21B 43/00** (2006.01)

CPC (source: EP US)  
**E21B 17/00** (2013.01 - EP); **E21B 41/00** (2013.01 - EP US)

Citation (applicant)  
• US 5662170 A 19970902 - DONOVAN JOSEPH F [US], et al  
• US 2011214920 A1 20110908 - VAIL III WILLIAM BANNING [US], et al  
• US 2010239441 A1 20100923 - BADE MARIA [DE], et al  
• US 6655456 B1 20031202 - YOKLEY JOHN M [US], et al  
• US 7874356 B2 20110125 - CORRE PIERRE-YVES [FR], et al  
• US 6863124 B2 20050308 - ARAUX GRIGORY L [US], et al  
• US 2012234603 A1 20120920 - VAIL III WILLIAM BANNING [US]  
• WO 0161232 A1 20010823 - NKT FLEXIBLES IS [DK], et al  
• US 6123114 A 20000926 - SEGUIN BRUNO ROGER [FR], et al  
• US 6085799 A 20000711 - KODAISSI ELIE [FR], et al  
• WO 2010112435 A1 20101007 - SOLVAY ADVANCED POLYMERS LLC [US], et al  
• EP 0383600 A2 19900822 - ICI PLC [GB]  
• US 4588546 A 19860513 - FEIL JOSEPH N [US], et al  
• "Additives for Plastics Handbook, 2nd edition,", JOHN MURPHY, article "chapter 5.2.3", pages: 43 - 48

Citation (search report)  
• [XY] EP 0383600 A2 19900822 - ICI PLC [GB]  
• [X] US 5204442 A 19930420 - NYE SUSAN A [US]  
• [Y] US 2013112409 A1 20130509 - BALENO BRIAN [US], et al  
• [A] US 2012279577 A1 20121108 - GOERING RAINER [DE], et al  
• [A] US 4960851 A 19901002 - STANILAND PHILIP A [GB]  
• [A] EP 0278720 A2 19880817 - ICI PLC [GB]

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**WO 2015010977 A1 20150129**; CN 105408397 A 20160316; EP 2851387 A1 20150325; EP 3024879 A1 20160601; JP 2016535142 A 20161110

DOCDB simple family (application)  
**EP 2014065206 W 20140716**; CN 201480041744 A 20140716; EP 13185207 A 20130919; EP 14739176 A 20140716;  
JP 2016528427 A 20140716