



(86) Date de dépôt PCT/PCT Filing Date: 2006/09/25
(87) Date publication PCT/PCT Publication Date: 2007/04/12
(45) Date de délivrance/Issue Date: 2013/12/31
(85) Entrée phase nationale/National Entry: 2008/07/25
(86) N° demande PCT/PCT Application No.: EP 2006/009288
(87) N° publication PCT/PCT Publication No.: 2007/039168
(30) Priorité/Priority: 2005/09/29 (EP05292035.2)

(51) Cl.Int./Int.Cl. *C09K 8/493* (2006.01),
C04B 28/02 (2006.01), *C04B 28/08* (2006.01),
E21B 33/13 (2006.01), *E21B 33/14* (2006.01)

(72) Inventeurs/Inventors:
BARLET-GOUEDARD, VERONIQUE, FR;
JAMES, SIMON, FR;
DROCHON, BRUNO, US;
PIOT, BERNARD, FR;
CARITEY, JEAN-PHILIPPE, FR

(73) Propriétaire/Owner:
SCHLUMBERGER CANADA LIMITED, CA

(74) Agent: SMART & BIGGAR

(54) Titre : COMPOSITION DE CIMENT POUR ENVIRONNEMENT SUPERCRITIQUE DE DIOXYDE DE CARBONE
(54) Title: CEMENT COMPOSITION FOR CARBON DIOXIDE SUPERCRITICAL ENVIRONMENT

(57) **Abrégé/Abstract:**

The invention provides a cement composition resistant to carbon dioxide including a hollow element for trapping carbonation products. The hollow element can be an additional component added to the cement composition, this component is made of hollow spherical or quasi spherical particles as cenospheres, sodium-calcium-borosilicate glass, silica-alumina microspheres, or a combination thereof. Or the hollow element is a spherical or quasi spherical void made in the set cement, for example by foaming the cement composition with a gas as air, nitrogen or a combination thereof. Use of such cement composition in carbon dioxide application is disclosed. Additionally, a method to cement a part of a borehole in presence with carbon dioxide is disclosed, a method to repair a part of a borehole in presence with carbon dioxide is disclosed using the above cement composition and a method to plug a part of a borehole in presence with carbon dioxide is disclosed.



