

Title (en)
DEFORMABLE DOWNHOLE STRUCTURES INCLUDING CARBON NANOTUBE MATERIALS, AND METHODS OF FORMING AND USING SUCH STRUCTURES

Title (de)
VERFORMBARE BOHRLOCHSTRUKTUREN MIT KOHLENSTOFFNANORÖHRCHENMATERIALIEN UND VERFAHREN ZUR FORMUNG UND VERWENDUNG SOLCHER STRUKTUREN

Title (fr)
STRUCTURES DE FOND DE TROU DÉFORMABLES COMPRENANT DES MATÉRIAUX EN NANOTUBES DE CARBONE ET PROCÉDÉS DE FORMATION ET D'UTILISATION DE TELLES STRUCTURES

Publication
EP 3426876 A4 20191016 (EN)

Application
EP 17763825 A 20170306

Priority
• US 201615063034 A 20160307
• US 2017020903 W 20170306

Abstract (en)
[origin: US2017254170A1] A deformable downhole article for use in a wellbore includes a tubular component configured for placement in a wellbore, a deformable material disposed around an outer surface of the tubular component, and an electrically conductive element comprising a carbon nanotube (CNT) material bonded to the deformable material. To form such a deformable downhole article, a deformable material is disposed around an outer surface of a tubular component, and an electrically conductive element comprising a carbon nanotube (CNT) material is bonded to the deformable material. In use, the deformable downhole article may be positioned within a wellbore, and the deformable material may be expanded to an expanded state. Expansion of the deformable material may strain the carbon nanotube (CNT) material of the electrically conductive element, and an electrical property of the electrically conductive element may be measured to deduce information about the state of the deformable material.

IPC 8 full level
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CPC (source: EP US)
E21B 33/12 (2013.01 - US); **E21B 33/1208** (2013.01 - EP US)

Citation (search report)
• [X] US 2012312560 A1 20121213 - BAHR JEFFREY L [US], et al
• [X] US 2012318532 A1 20121220 - VAIDYA NITIN Y [US], et al
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• [X] US 9010428 B2 20150421 - MAZYAR OLEG A [US], et al
• [X] WO 2010127240 A1 20101104 - WEATHERFORD LAMB [US], et al
• [X] US 2015198008 A1 20150716 - SMITH CHARLES TIMOTHY [US], et al
• See references of WO 2017155868A1

Designated contracting state (EPC)
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