

Title (en)  
DETECTING A DRILL STRING WASHOUT EVENT

Title (de)  
ERKENNUNG EINES AUSSCHWEMMUNGSEREIGNISSES EINES BOHRSTRANGS

Title (fr)  
DéTECTION D'UN ÉvÉNEMENT DE FUITE DE TRAIN DE TIGES DE FORAGE

Publication  
**EP 2864576 A4 20160727 (EN)**

Application  
**EP 13806487 A 20130620**

Priority  
• US 201261663240 P 20120622  
• US 2013046678 W 20130620

Abstract (en)  
[origin: WO2013192365A1] A method for detecting a drill string washout event. The method includes locating a drill string in a wellbore formed in a subterranean formation. A drilling fluid is pumped into the drill string. The drill string includes a turbine that spins in response to the drilling fluid flowing therethrough. A comparison is made between a rate that the drilling fluid is pumped into the drill string and a spin rate of the turbine. A defect is determined to be formed in the drill string based upon the comparison.

IPC 8 full level  
**E21B 21/08** (2006.01); **E21B 4/02** (2006.01); **E21B 47/008** (2012.01); **E21B 47/10** (2012.01)

CPC (source: EP US)  
**E21B 4/02** (2013.01 - US); **E21B 21/08** (2013.01 - EP US); **E21B 47/117** (2020.05 - EP US)

Citation (search report)  
• [X] US 2925251 A 19600216 - ARPS JAN J  
• [X] US 2004124009 A1 20040701 - HOTEIT LEILA [FR], et al  
• [XI] WO 2009102735 A2 20090820 - BAKER HUGHES INC [US], et al  
• [X] US 4941951 A 19900717 - SHEPPARD MICHAEL [US], et al  
• See references of WO 2013192365A1

Designated contracting state (EPC)  
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DOCDB simple family (publication)  
**WO 2013192365 A1 20131227; WO 2013192365 A8 20141231**; CA 2876895 A1 20131227; EP 2864576 A1 20150429;  
EP 2864576 A4 20160727; US 2015184504 A1 20150702

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**US 2013046678 W 20130620**; CA 2876895 A 20130620; EP 13806487 A 20130620; US 201314406223 A 20130620