

Title (en)

Rotary and axial modulation for mud-pulse telemetry

Title (de)

Rotations- und Axialmodulierung für Mud-Pulse-Telemetrie

Title (fr)

Modulation rotative et axiale pour télémetrie par impulsions dans la boue

Publication

**EP 2957717 A1 20151223 (EN)**

Application

**EP 14290191 A 20140619**

Priority

EP 14290191 A 20140619

Abstract (en)

A mud-pulse telemetry tool (46) carried by a drill collar and comprising a stator (62), positionally fixed relative to the drill collar, and a rotor (64), axially offset from the stator by a gap. A first actuator (58) is operable to cause selective rotation of the rotor relative to the stator. A second actuator (59) is operable to cause selective adjustment of the gap during operation of the mud-pulse telemetry tool within a wellbore. Such telemetry tool may form a pressure pulse generator, operable to generate a pressure wave in drilling mud in the wellbore, and a data encoder, operable to receive data from a data source and vary the pressure wave based on the data such that the pressure wave encodes the data, wherein the pressure pulse generator and the data encoder are collectively operable to modulate the data-encoded pressure wave utilizing at least three different pressure levels.

IPC 8 full level

**E21B 47/18** (2012.01)

CPC (source: EP)

**E21B 47/20** (2020.05)

Citation (search report)

- [X] US 5583827 A 19961210 - CHIN WILSON C [US]
- [A] US 2013076527 A1 20130328 - SITKA MARK A [US], et al
- [A] US 3770006 A 19731106 - SEXTON J, et al
- [A] US 3739331 A 19730612 - SLOVER V, et al

Cited by

US2021372278A1; US11753932B2; US10246995B2

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)

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DOCDB simple family (application)

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