

Title (en)  
APPARATUS AND METHODS FOR CONTROLLING DRILLING

Title (de)  
VORRICHTUNG UND VERFAHREN ZUR BOHRSTEUERUNG

Title (fr)  
APPAREIL ET PROCÉDÉS DE COMMANDE DE FORAGE

Publication  
**EP 4370778 A1 20240522 (EN)**

Application  
**EP 21950341 A 20210716**

Priority  
US 2021041906 W 20210716

Abstract (en)  
[origin: WO2023287423A1] A drilling control system may access a drilling plan for a borehole comprising one or more of planned path for the borehole, drill string information, mud properties, drill bit properties, formation properties, and drill rig properties. The system may receive a plurality of operating parameters from a rig for the borehole including one or more of an observed toolface, a spindle setting, a rate of penetration, a differential pressure, and a weight-on-bit. The system may receive one or more propagation functions for the borehole determined by a model of the drill string. The system may determine one or more spindle changes or block speed changes based at least in part on the propagation functions and the plurality of operating parameters. The system may generate one or more predicted drill properties from a simulator using the one or more spindle changes or the one or more block speed changes.

IPC 8 full level  
**E21B 44/00** (2006.01)

CPC (source: EP)  
**E21B 44/00** (2013.01); **E21B 2200/20** (2020.05)

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

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
**WO 2023287423 A1 20230119**; EP 4370778 A1 20240522

DOCDB simple family (application)  
**US 2021041906 W 20210716**; EP 21950341 A 20210716