

Title (en)

METHOD AND SYSTEM FOR CONTROLLING VIBRATIONS IN A DRILLING SYSTEM

Title (de)

VERFAHREN UND SYSTEM ZUM STEUERN VON SCHWINGUNGEN IN EINEM BOHRSYSTEM

Title (fr)

PROCÉDÉ ET SYSTÈME POUR CONTRÔLER LES VIBRATIONS DANS UN SYSTÈME DE FORAGE

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Application

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Abstract (en)

[origin: WO2013076184A2] The invention provides a control system and method for limiting vibrations in a drilling system, including a drill string and a drive system for providing a drive torque for rotating the drill string at a reference frequency (Omegaref). The control system comprises: - a sensor module for determining at least one uphole parameter of the drilling system; a model module provided with a model of the drilling system, the model module being adapted to provide modeled parameters of the drilling system using the drive torque as an input; - a model gain module for providing a model gain vector (L) to the model module in response to one or more of the modeled parameters and the drive torque (Tm), the model gain vector enabling the module module to update the model thereby obtaining an updated model; and a control module for providing a torque correction factor (u) to the drive system depending on the modeled parameters, the uphole parameter, the reference frequency (Omegaref), and the drive torque (Tm).

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