

Title (en)

Pump noise filtering apparatus for a borehole measurement while drilling system utilizing drilling fluid pressure sensing and drilling fluid velocity sensing.

Title (de)

Pumpengeräuschfiltergerät für eine Bohrlochmessung während des Bohrens mittels Messung des Druckes und der Geschwindigkeit der Bohrflüssigkeit.

Title (fr)

Dispositif de filtrage du bruit de la pompe pour un système de mesure pendant le forage d'un puits utilisant la détection de la pression et la vitesse du fluide de forage.

Publication

**EP 0078906 A2 19830518 (EN)**

Application

**EP 82108792 A 19820923**

Priority

US 31949981 A 19811109

Abstract (en)

An apparatus for removing pulsation noise caused by a well drilling fluid circulating pump from fluid pressure pulse transmitted measurement while drilling data passing through drilling fluid in a drill string of a borehole measurement while drilling system. The noise filtering apparatus includes a drilling fluid pressure sensor, a drilling fluid velocity sensor, and an adaptive estimator that memorizes the pulse noise signature of a pump in synchronization with the pump's strokes. The memorized signature is removed from the signal data derived from pressure pulsations and velocity measurements in the drilling fluid in order to remove or filter the pump's noise or pressure and velocity signal disturbing influence from this data. The adaptive estimator is arranged such that it will compensate for changing operating conditions of the pump so that this pump created noise is substantially, continuously filtered from the measurement while drilling data.

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