

Title (en)
A DOWNHOLE ASSEMBLY WITH SPRING ISOLATION FILTER

Title (de)
BOHRLOCHANORDNUNG MIT FEDERISOLIERUNGSFILTER

Title (fr)
ENSEMBLE DE FOND DE TROU AVEC FILTRE D'ISOLATION DE RESSORT

Publication
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Application
EP 21737236 A 20210527

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US 2021034569 W 20210527

Abstract (en)
[origin: WO2022250674A1] The present invention is directed to an apparatus for use on a structural member having a longitudinal axis, the structural member being configured to propagate stress wave energy in an operational state, the stress wave energy being characterized by an operational frequency spectrum. The apparatus has a housing assembly including a first end, a second end, and one or more protective enclosures configured to accommodate one or more devices. The housing assembly is configured to be rotationally registered to the structural member when coupled to the structural member, and is characterized by a predetermined housing mass. A spring arrangement is coupled between the structural member and the first end and/or coupled between the structural member and the second end in the operational state. The spring arrangement is characterized by a predetermined force-displacement relationship. The housing assembly and the spring arrangement form an isolation filter characterized by a predetermined spectral transfer function, the predetermined spectral transfer function being a function of the predetermined housing mass and the predetermined force-displacement relationship. The predetermined spectral transfer function includes a passband having frequencies that are substantially outside the operational frequency spectrum wherein the stress wave energy is substantially attenuated in the operational state so that the housing member is substantially isolated from the stress wave energy.

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