

Title (en)

AN APPARATUS FOR THERMAL SPALLATION OF A BOREHOLE

Title (de)

VORRICHTUNG ZUR THERMISCHEN SPALLATION EINES BOHRLOCHS

Title (fr)

APPAREIL DE SPALLATION THERMIQUE D'UN Puits DE FORAGE

Publication

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Application

**EP 17188149 A 20170828**

Priority

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Abstract (en)

The present invention refers to an apparatus for thermal spallation of a borehole, wherein the borehole comprises a proximal region with a borehole fluid with a pressure  $p_{H_2O}$ , and a distal region filled with a fluid, in particular filled with an exhaust gas, with a pressure  $p_{gas,out}$ . The apparatus comprises at least one section with a thermal spallation system having a predetermined weight adapted for insertion down into the distal region of the borehole, and at least one barrier section, comprising at least one element that is designed to form a barrier between the distal region of the borehole filled with a gas and the proximal region of the borehole filled with the borehole fluid, and that is arranged adjacent to the at least one section with the thermal spallation system. The at least one element, forming a barrier between the distal and proximal region, is designed to adapt in a dynamic manner to changing pressure  $p_{H_2O}$  of the borehole fluid in the proximal region and/or to changing pressure  $p_{gas,out}$  of the fluid, in particular gas in the distal region of the borehole such that a flow of the borehole fluid from the proximal region of the borehole towards the distal end of the borehole is prevented, and/or a pressure accumulation of the fluid, in particular gas in the distal region beyond a certain pressure threshold, which corresponds to the weight of the section with the thermal spallation system, is prevented.

IPC 8 full level

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Citation (applicant)

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