

Title (en)

COVERAGE-TYPE DEEP-SEA MUD VOLCANO-ASSOCIATED NATURAL GAS HYDRATE EXPLOITATION SYSTEM AND METHOD

Title (de)

ABDECKUNGSARTIGES TIEFSEESCHLAMM-VULKAN-ASSOZIIERTES ERDGASHYDRATAUSBEUTUNGSSYSTEM UND VERFAHREN

Title (fr)

SYSTÈME ET PROCÉDÉ D'EXPLOITATION D'HYDRATES DE GAZ NATUREL DE BOUES DE HAUTE MER DE TYPE COUVERTURE ASSOCIÉS À UN VOLCAN

Publication

EP 3879069 B1 20220323 (EN)

Application

EP 20211931 A 20201204

Priority

CN 202010159725 A 20200309

Abstract (en)

[origin: EP3879069A1] The invention discloses a coverage-type deep-sea mud volcano-associated natural gas hydrate exploitation system and method, which are mainly applied to submarine mud volcano-associated superficial massive hydrates and exploit natural gas hydrates through a coverage-type heat-insulation heating method according to the occurrence characteristics of deep-sea mud volcano-associated hydrates, based on a specially-designed gas isolation and heat insulation cover and thermal electrodes. Decomposed hydrates flow into a production well via perforated holes of the production well under the effect of a pressure difference at the bottom of the well, and a depressurization device is disposed in the production well to further decompose the hydrates. This technical solution can effectively overcome the defects of small heating range, high energy consumption and low output rate of a heating-type hydrate exploitation method, greatly improve the exploitation efficiency and effectively avoid possible environmental risks and eco-catastrophes caused by large-area excavation on the seabed of existing methods; in addition, solar energy is used on the site, so that the cost is low, environmental friendliness is realized, large-scale efficient and economical exploitation of the hydrates is realized, the application prospect is broad, and the application value is high.

IPC 8 full level

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CPC (source: CN EP)

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