

Title (en)

Separator for separating solid particles from liquid and gas flows for high differential pressures

Title (de)

Trennvorrichtung zur Abtrennung von Feststoffpartikeln aus Flüssigkeits- und Gasströmungen für hohe Differenzdrücke

Title (fr)

Dispositif de séparation destiné à séparer des particules de matière solide d'écoulements gazeux et liquides pour des pressions différentielles élevées

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Application

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Abstract (en)

[origin: CA2956483A1] The subject matter of the invention is a separating device for removing solid particles from liquids and/or gases in extraction wells, comprising a) an annular stack (7) of at least three brittle-hard annular discs (8), the upper side (9) of the annular discs (8) having at least three spacers (10), which are distributed uniformly over the circular circumference of the discs and the contact area (11) of which is planar, so that the spacers (10) have planiform contact with the underside of an adjacent annular disc (8), and the annular discs (8) being stacked and fixed in such a way that between the individual discs (8) there is in each case a separating gap (14) for the removal of solid particles, and the axial projection of the annular discs (8) at the inner and the outer circumference being circular, and the brittle-hard material of the annular discs (8) being chosen from oxidic and non-oxidic ceramic materials, mixed ceramics of these materials, ceramic materials with the addition of secondary phases, mixed materials with fractions of ceramic or metallic hard materials and with a metallic binding phase, powder-metallurgical materials with hard material phases formed in situ and long- and/or short-fibre-reinforced ceramic materials, b) a perforated pipe (1), which is located inside the annular stack (7) and on which the brittle-hard annular discs (8) are stacked, c) at least three bands (15), which are provided axially parallel and uniformly spaced apart on the lateral surface (21) of the perforated pipe (1) located inside the annular stack (7) and onto which the annular discs (8) have been pushed, whereby the annular discs (8) are centred on the perforated pipe (1), and d) an end cap (5) at the upper end and an end cap (6) at the lower end of the annular stack (7), the end caps (5, 6) being firmly connected to the perforated pipe (1). The subject matter of the invention is likewise the use of a separating device according to the invention for removing solid particles from liquids and/or gases in a process for extracting liquids and/or gases from extraction wells

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