

Title (en)

DEVICE USED IN THE HIGH GRADIENT MAGNETIC SEPARATION TECHNIQUE FOR SEPARATING MAGNETIZABLE PARTICLES

Publication

**EP 0111825 B1 19860319 (DE)**

Application

**EP 83112268 A 19831206**

Priority

DE 3247522 A 19821222

Abstract (en)

[origin: US4544482A] The device using high-gradient magnetic separation techniques to extract magnetizable particles from a flowing medium contains a filter structure which has several wire nets made of non-corroding, ferromagnetic material with a predetermined mesh width and wire gauge. These nets are arranged, one behind the other, perpendicular to the direction of flow of the medium. The wire nets are subjected to a magnetic field that is either parallel or antiparallel to the direction of flow of the medium. In order to increase the rate of separation, particularly for particles of varying size and magnetizability, and the maintenance interval for this separation device, the filter structure is divided into at least two parts (10, 11) arranged one after the other along the direction of flow of the medium (M), with the magnetic flux density (B1) present in the region of the first part (10) of the filter structure that is smaller than the magnetic flux density (B2) present in the region of the second part (11) of the filter structure. At least the wires in the nets (14) at the end (16) of the device where the medium (M) enters the first part (10) of the filter structure have a heavier gauge than the wires of the nets (15) at the outlet end (17) where the medium (M') leaves the second part (11) of the filter structure.

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**B03C 1/02**

IPC 8 full level

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