

Title (en)

VIBRATION EXCITATION TAMPING APPARATUS

Title (de)

STOPFVORRICHTUNG MIT SCHWINGUNGSANREGUNG

Title (fr)

APPAREIL DE BOURRAGE À EXCITATION PAR VIBRATION

Publication

**EP 4379136 A1 20240605 (EN)**

Application

**EP 22848408 A 20220721**

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Abstract (en)

The present invention relates to a vibration excitation tamping device, which pertains to the technical field of rail transportation. The device comprises: a liftable tamping machine frame; a hydraulic vibration excitation cylinder hinged in the middle of the tamping machine frame; at least one connecting plate hinged with the piston rod end of the hydraulic vibration excitation cylinder; double-end telescopic clamping cylinders respectively connected to both sides of the connecting plate; and paired pick arms hinged on both sides of the tamping machine frame, with the upper ends thereof hinged with the corresponding double-end telescopic clamping cylinders. The present invention achieves balanced forces and symmetrical movements on the upper ends of the paired tamping picks as they are subjected to equal and opposite forces, thus ensuring centered clamping and having a very compact structure. In addition, due to the configuration of centralized vibration excitation drive and reasonable dispersed clamping drive, the number of vibration excitation devices is reduced by half, resulting in a significant cost reduction. Moreover, since two sets of tamping picks are mounted on different pick arms along the length direction of the sleeper, when the compactness of the railway ballast varies at two corresponding positions, clamping with a uniform compaction can be achieved.

IPC 8 full level

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