

Title (en)
Device and treatment method of an intaglio printing plate

Title (de)
Vorrichtung und Verfahren zum Bearbeiten einer Tiefdruckform

Title (fr)
Appareil et méthode de traitement d'une plaque d'impression en creux

Publication
EP 0927646 A1 19990707 (DE)

Application
EP 98810001 A 19980105

Priority
EP 98810001 A 19980105

Abstract (en)
The apparatus for machining a gravure printing element (20) with a holding unit (3) for a turning tool (1), incorporates a controllable transducer (5), specifically a piezoelectric transducer for generation of vibrations acting on the turning tool. Removal of the more wear resistant layer (23) takes place using a turning tool subjected to vibrations from a transducer. An Independent claim is also included for a machining installation based on the proposed apparatus and method. Preferred Features: The transducer (5) is rigidly coupled to the turning tool (1). The apparatus can incorporate two transducers (5) which are arranged so that the turning tool is vibrated in two mutually orthogonal directions perpendicular to the longitudinal axis (1b). The transducer (5) can be arranged so that the tool is vibrated in the direction of the longitudinal axis (1b). The tool is mounted so that it vibrates at its natural frequency. The tool holding unit is provided with a sensor for determining the vibration amplitude of the cutting element (1a) of the tool. Such a sensor takes the form of a piezoelectric sensor, in particular, an element of the transducer (5). The latter can be operated at a frequency between 1 kHz and 100 kHz. The vibration amplitude of the cutting element is relayed to a control unit which is provided with means for maintaining this amplitude within predetermined limits. The more wear resistant layer (23) consists of chromium or a metal oxide, while the layer (22) consists of zinc or copper or their alloys. Vibrations of the cylinder (20) are measured, and machining parameters are adjusted to reduce such vibrations.

Abstract (de)
Die Vorrichtung zum Bearbeiten einer Tiefdruckform (20), insbesondere eines Tiefdruckzylinders, umfasst eine Haltevorrichtung (3) für ein Drehwerkzeug (1) zum Bearbeiten der Tiefdruckform (20), sowie zumindest einen ansteuerbaren Wandler (5), insbesondere einen piezoelektrischen Wandler, zum Erzeugen einer auf das Drehwerkzeug (1) wirkenden Schwingung. <IMAGE>

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CPC (source: EP)
B41N 3/00 (2013.01)

Citation (search report)
• [A] EP 0808723 A1 19971126 - ROSA VALERIO [IT]
• [A] US 4924713 A 19900515 - MACHINO TOSHIMICHI [JP], et al

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EP 0927646 A1 19990707; DE 59806108 D1 20021205; ES 2185097 T3 20030416

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