

Title (en)

METHOD FOR GRINDING INTERNALLY LONG BORES WITH EXTREMELY SMALL DIAMETER IN PIECES AND DEVICE FOR CARRYING OUT THIS METHOD

Publication

EP 0276439 B1 19910327 (DE)

Application

EP 87118373 A 19871211

Priority

DE 3701219 A 19870117

Abstract (en)

[origin: US4831783A] There is provided a method and apparatus for inside surface finishing with a high degree of dimensional accuracy and axial parallelism for long bores of very small diameter in work pieces. The method employs a high tensile strength steel wire as the grinding tool rotating at high speed under tension just below its yield strength. The wire is reciprocally moved back and forth in an axial direction and is coated with abrasive material. The work piece with the wire passing through its bore to be surface finished, is rotated eccentrically with respect to the wire and is axially parallel thereto. The inner wall of the bore is pressed against the wire which passes therethrough. The apparatus includes two clamping devices which reciprocally move back and forth together with a common base plate and which are rotated by synchronized drives. Between the two clamping devices the wire is stressed under tension, and a work piece holder which can be moved in a vertical direction transverse to the wire rotates the work piece.

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IPC 8 full level

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