

Title (en)

Method of centerless grinding, and centerless grinding machine for stepped work.

Title (de)

Spitzenloses Schleifverfahren und spitzenlose Schleifvorrichtung für Stufenwerkstück.

Title (fr)

Procédé de meulage sans centre et machine de meulage sans centre pour pièces à gradius.

Publication

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Application

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Priority

- JP 4864992 A 19920305
- JP 31724092 A 19921126
- JP 34423291 A 19911226

Abstract (en)

The large-diameter portion grinding wheel (7) is rotated and controlled by the drive mechanism, and the small-diameter portion grinding wheel (8) is independently rotated and controlled by the drive mechanism (12a,12b) and moved radially in the direction of arrow. The large-diameter portion is centerless-ground by the regulating wheel (9), grinding wheel and the work support blade. The small-diameter portion is supported by the shoe (10) and the blade, and centerless-ground by the grinding wheel fed in the direction of arrow while the end face of the large-diameter portion can be ground. Thus, there can be provided an improved method of centerless grinding for a stepped work and an improved centerless grinding machine, which can solve the problem of the slip caused by the difference in peripheral speed between the large- and small-diameter portion grinding wheels (7,8), and permits a precision grinding and a grinding of the end face at the stepped portion as necessary. Further, by axial traversing of the large-diameter portion grinding wheel (7) or of the work (1), the boundary between the large- and small-diameter portions can be ground without any unfinisheding. <IMAGE>

IPC 1-7

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Citation (search report)

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- [A] DE 3505102 A1 19850822 - TOYODA MACHINE WORKS LTD [JP]
- [A] GB 559604 A 19440225 - CHURCHILL MACHINE TOOL CO LTD, et al
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- [Y] PATENT ABSTRACTS OF JAPAN vol. 4, no. 17 (M-91)9 February 1980 & JP-A-54 152 295 (NTN TOYO BEARING CO LTD) 30 November 1979
- [A] MACHINES AND TOOLING. (STANKI I INSTRUMENTY) vol. 30, no. 7, 1959, MELTON MOWBRAY GB pages 32 - 33 GIUSTINA 'SIMULTANEOUS GRINDING OF CYLINDRICAL AND FACE SURFACES ON A CENTERLESS GRINDING MACHINE'
- [A] PATENT ABSTRACTS OF JAPAN vol. 9, no. 146 (M-389)(1869) 21 June 1985 & JP-A-60 25 640 (TOYODA KOKI K.K.) 8 February 1985
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