

ABSTRACT:

Method of manufacturing a dynamic groove bearing, die suitable for use in such a method, and housing and bearing part manufactured by such a method; data storage unit provided with such a groove bearing; method of manufacturing a rotatable scanning unit, and magnetic tape device provided with such a scanning unit.

A method of manufacturing a dynamic groove bearing (45, 71, 111) with an external bearing part (17, 61, 91) and an internal bearing part (47, 67, 113) which are rotatable relative to one another and which have cooperating bearing surfaces (39, 53), (63, 69), (103, 121) with groove patterns (41, 65, 105). According to the invention, the bearing surface (39, 63, 103) of one of the bearing parts (17, 61, 91) is formed and simultaneously provided with the groove pattern (41, 65, 105) through plastic deformation of a ductile material (36, 100) by means of a press tool (37, 101) and a die (1, 55, 73) with a die pattern (13, 59, 83) which corresponds to the groove pattern (41, 65, 105). The ductile material (36, 100) is, for example, a tin alloy such as white metal or Babbitt's metal. The die (1, 55, 73) can be repeatedly used so that large numbers of dynamic groove bearings (45, 71, 111) according to the invention can be manufactured in a comparatively simple manner.

The method is used in the manufacture of a rotatable scanning unit (123) for reading or writing a magnetic tape (125) in a magnetic tape device (157). The method is also used for the manufacture of a dynamic groove bearing (233, 235) by means of which a rotatable information disc (213) is supported in a compact, cassette-shaped data storage unit (209).

(Fig. 1a)



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ACTION