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DYNAMIC PRESSURE BEARING APPARATUS

ABSTRACT

A dynamic pressure bearing apparatus supporting a shaft portion or a bearing portion which demonstrates relative rotational movement by a dynamic pressure force of a lubricating fluid generated in a clearance between the bearing portion and the shaft portion, and enabling the lubricating fluid to be excellently prevented from leaking to the outside of the bearing with a simplified structure. A pressure is constantly applied to the lubricating fluid (5) in a bearing gap toward a closed side of the bearing gap by the inward pressure application force providing effect by fluid pressure applying means which gives the lubricating fluid (5) an inward pressure application force directed from an opened side toward the closed side of the bearing gap, e.g., dynamic pressure generation grooves (13a) having a shape which generates an unbalanced dynamic pressure that a dynamic pressure (Pa1) having an inward vector component and a dynamic pressure (Pa2) having an outward vector component are simultaneously generated and the dynamic pressure (Pa1) having the inward vector component surpasses, and a gas-liquid interface (6) of the lubricating fluid (5) is maintained so as to be pushed inwardly. Also, a quantity of the lubricating fluid (5) to be filled is set to a quantity that the lubricating fluid (5) fills the fluid pressure applying means even if the gas-liquid interface (6) moves to the bearing gap side, which is generated when a thrust plate (16) or the like relatively floats in the thrust direction,



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thereby excellently preventing the lubricating fluid (5) from leaking from a seal portion (RS).

Fig. 6