

Title (en)

Centrifuge with dismountable rotor and a device for the axial locking of the rotor on the drive shaft and rotor for such a centrifuge

Title (de)

Zentrifuge mit abnehmbarem Rotor und einer Einrichtung zur axialen Verriegelung des Rotors auf der Antriebswelle, sowie Rotor für eine solche Zentrifuge

Title (fr)

Centrifugeuse à rotor démontable et à dispositif de blocage axial du rotor sur une tête d'entraînement, et rotor pour une telle centrifugeuse

Publication

EP 0911080 A1 19990428 (FR)

Application

EP 98402433 A 19981002

Priority

FR 9713308 A 19971023

Abstract (en)

A centrifuge has a rotating driving head (2) fixed to a rotating shaft (43), a rotor (3) fixed to the driving head, a means (21) of coupling the driving head and the rotor in rotation, and a means of blocking axial movement on the shaft comprising a means of applying an axial force to a surface (9) of the rotor where the force increases with the rotational speed of the driving head. The means of applying an axial force to the rotor has at least two inertial masses (56) mounted on one end of the driving head symmetrically about its axis of rotation (42). Each mass can be moved between a position unblocking the rotor axially, in which the mass is retracted into the driving head, and a position blocking the rotor axially, depending on the speed of rotation of the head. In this position, the pressing part of the mass extends beyond the external radial surface (49) of the driving head and acts with a ramped surface (11) to a receiving opening (7) on the rotor. This ramped surface is inclined towards the inside of the opening and towards the pressing surface (9) of the rotor. The ramp is conical. At least one mass is held elastically from its retracted position to an initial blocking position. The pressing surface (9) and the holding surface (47) are conical and matched. At least one mass is a shock load to produce a resonant signal during the blocking. An Independent claim is included for a rotor for a centrifuge as above with a receiving opening for at least one end of a driving head, with a surface pressing against the holding surface and at least one ramp which acts with part of a mass, inclined towards the inside from the outside and towards the pressing surface.

Abstract (fr)

L'invention concerne une centrifugeuse du type comprenant une tête d'entraînement (2) en rotation solidaire d'un arbre de rotation (43), un rotor (3) pouvant être monté de manière amovible sur la tête d'entraînement, dans une position d'entraînement en rotation, des moyens (21, 67) d'accouplement en rotation de la tête d'entraînement et du rotor, et un dispositif de blocage axial du rotor sur la tête d'entraînement. Le dispositif de blocage axial comprend des moyens (56) d'application, sur le rotor, d'une force de maintien axial d'une surface d'appui du rotor contre une surface de retenue solidaire de la tête d'entraînement croissante avec la vitesse de rotation de la tête d'entraînement. <IMAGE>

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Citation (search report)

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