

Title (en)

ANTI-FRICTION BEARING, IN PARTICULAR A SOLID-BODIED BALL BEARING, ROLLER BEARING OR NEEDLE BEARING, COMPRISING ROLLING BODIES THAT CONSIST OF A SHAPE MEMORY ALLOY

Title (de)

WÄLZLAGER, INSBESONDERE VOLLWÄLZKÖRPERIGES KUGEL-, ROLLEN- ODER NADELLAGER MIT WÄLZKÖRPERN AUS EINER FORMGEDÄCHTNISLEGIERUNG

Title (fr)

PALIER A ROULEMENT, NOTAMMENT PALIER A ROULEMENT A BILLES, A ROULEAUX OU A AIGUILLES, REMPLI D'ELEMENTS DE ROULEMENT DONT CERTAINS SONT EN ALLIAGE A MEMOIRE DE FORME

Publication

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Application

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Abstract (en)

[origin: WO2006050698A1] The invention relates to an anti-friction bearing (1), in particular a solid-bodied ball bearing, roller bearing or needle bearing, which essentially consists of an outer bearing ring (2) and an inner bearing ring (3), in addition to a number of rolling bodies (4, 5) that are located between the bearing rings (2, 3) and that roll in relation to one another along a race (6) of the outer bearing ring (2) and a race (7) of the inner bearing ring (3) without the guidance of a cage. According to the invention, the race (6) of the outer bearing ring (2) and the race (7) of the inner bearing ring (3) are laterally delimited by two respective continuous rims (8, 9 and 10, 11) that are formed as one piece with the races. The anti-friction bearing (1) is filled with the rolling bodies (4, 5) through the free space (12) between one rim (9) of the outer bearing ring (2) and one rim (11) of the inner bearing ring (3), at least a partial quantity of the rolling bodies (5) consisting of a shape memory alloy, the cross-section of the bodies being deformed to fit the dimensions of the free space (12) between the rims (9, 11) of the bearing rings (2, 3). After introduction into the anti-friction bearing (1) and once they have reached a specific temperature, the bodies independently regain their original shape, which corresponds to that of the other rolling bodies (4).

IPC 8 full level

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