

MOTORISED DEVICE WITH RECIPROCATING MOTION OF A LOCOMOTION MEMBER AND ASSOCIATED CONTROL METHOD

ABSTRACT

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The present invention relates to a motorized device (100) capable of moving in a fluid and comprising one or more locomotor systems (101), each having at least one drive assembly that is linked to at least one locomotion member (102) and a motor (104) that is controlled by a voltage such that:

- 10 - the frequency of a reciprocating motion of the drive assembly matches the resonant frequency of the locomotion member that is linked to a non-movable portion by at least one prestrained elastic means (111, 112); and
- the instantaneous amplitude of the reciprocating motion of the drive assembly is adjusted to control the average position and the maximum amplitude of the
- 15 reciprocating motion of the locomotion member,
- the drive assembly comprising at least one speed reducer (106 and 108) for reducing the speed of rotation of the motor such that, when the motor is operating at is maximum mechanical power, the speed of rotation transmitted to the at least one locomotion member is reduced to match said resonance frequency.

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(Figure 2)