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Coste

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(54) **ELECTROMAGNETICALLY DRIVEN MARINE VIBRATOR**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 718 days.

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(57) **ABSTRACT**

A marine vibrator has a housing that comprises a displacement member, the displacement member having a first position and a second position, the housing and the displacement member together defining an internal volume. A linear electromagnetic motor interacts with the displacement member so as to move the displacement member between a first position and a second position and correspondingly strokes the displacement member to cover a volume. The linear electromagnetic motor comprises magnets and coils that when energized create an electromagnetic force there between, wherein the linear electromagnetic motor comprises a piston and a guide that substantially surrounds the piston. The piston has incorporated therein either the coils or the magnets, and the guide having incorporated therein the other of the coils or the magnets. The piston is in interaction with the displacement member.

17 Claims, 3 Drawing Sheets

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CPC **G01V 1/133** (2013.01); **G01V 1/145** (2013.01)

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See application file for complete search history.

