United States Patent [19]

Luscombe

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[54] **APPARATUS FOR MEASURING THE VERTICAL MOTION OF A FLOATING PLATFORM**

[75] Inventor: **John Luscombe**, Oxford, England

[73] Assignee: **Technical Survey Services Ltd.**, Bicester, England

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[52] **U.S. Cl.** ..... **73/170 A**; 73/178 R

[58] **Field of Search** ..... 73/170 A, 178 R

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Primary Examiner—Donald O. Woodiel
Attorney, Agent, or Firm—Marjama & Pincelli

[57] **ABSTRACT**

An apparatus and method for measuring the vertical motion of a floating platform e.g. a survey vessel, caused by wave action. The apparatus includes a sensor having three accelerometers (**11,12,13**) arranged on mutually perpendicular axes (Ax,Ay,Az) so that one accelerometer acts in a vertical plane and the other two act in a horizontal plane. Output signals (**S1,S2,S3**) from the accelerometers are continually sampled through a multiplexer (**14**) and are passed through an ADC (**19**) and a shift register (**21**) to provide output signals for a data processor (D) which provides a signal A indicative of the vertical position of the platform. In the method, the accelerometer output signals (**S1,S2,S3**) are corrected for offsets by use of a reference signal (So) and the corrected signals are used to derive the signal (A) which may be double integrated to obtain the final signal (A3) relating to vertical displacement.

13 Claims, 3 Drawing Sheets