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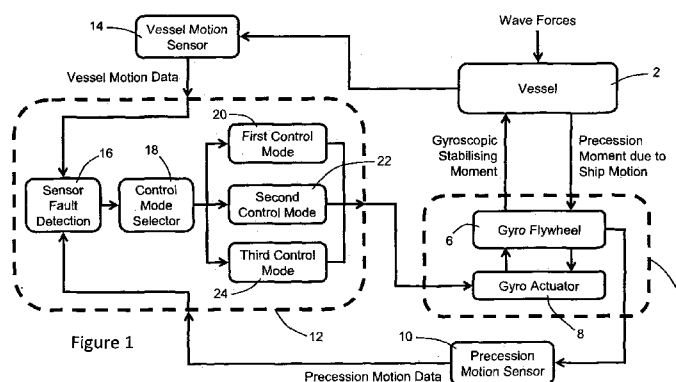
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(54) Title: FAULT TOLERANT VESSEL STABILISER CONTROL SYSTEM



(57) **Abstract:** A vessel stabiliser control system (12) includes a sensor fault detection means (16) which senses the availability of sensing signals from a gyrostabiliser precession motion sensor (10) and a vessel roll motion sensor (14). The control system (12) controls the action of a gyro-actuator (8) which is mechanically coupled to a gyrostabiliser (4). The benefit of employing fault sensing of the sensors providing the process control variables is that the sensed number of available process control variables (or sensors) can be used to activate a tiered system of control modes. Each tiered control mode is designed to utilise the available process control variables to ensure safe and effective operation of the gyrostabiliser (4) that is tolerant of sensor faults and loss of power supply. A control mode selector (18) is provided for selecting the appropriate control mode based on the number of available process control variables.