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Avitan

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[54] **STABILIZATION SYSTEM FOR LOAD HANDLING EQUIPMENT**

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[57] ABSTRACT

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A processor implemented stabilization system for load handling equipment monitors at least a portion of the equipment weight load at an equipment support member. Reduction below or increase above predetermined values signals an approaching tip over condition and triggers alarm condition responses for stabilization of the equipment. In a counter-balanced lift truck, the equipment weight load on a rear steer wheel is carried by an outer bearing race of a spindle and is transferred from the race to a load cell which is positioned between the race and a shoulder of a mounting tube. The load cell output is received at a processor which monitors the cell to determine if there is an approaching longitudinal tip over condition (toward or away from the load) as well as a lateral tip over condition. Upon sensing an approaching tip over condition, the processor implements one or more corrective measures such as actuation of an annunciator, preventing an increase in vehicle speed, preventing elevation of the load, preventing mast tilt, etc.

[51] **Int. Cl.**⁷ **B66F 9/06**

[52] **U.S. Cl.** **414/636; 187/242; 212/277**

[58] **Field of Search** 414/631, 636;
212/277; 280/402; 187/242

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7 Claims, 7 Drawing Sheets

