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(54) **Title:** SYSTEMS, METHODS AND APPARATUS FOR IN-SERVICE TANK INSPECTIONS

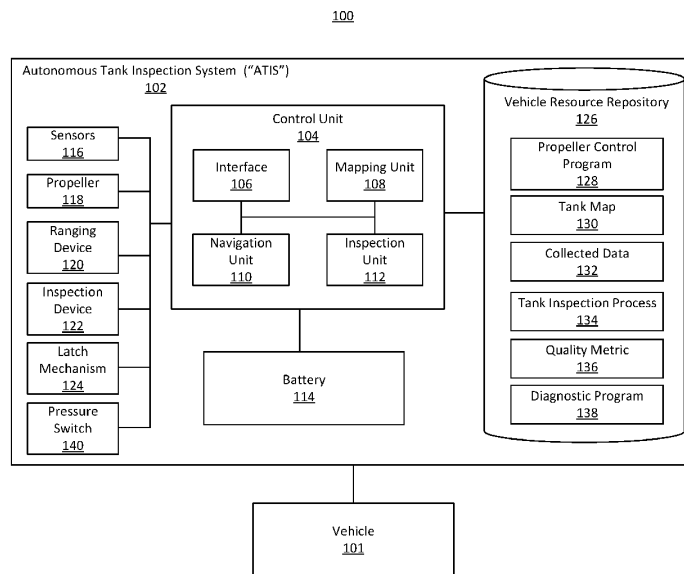


FIG. 1

(57) **Abstract:** Systems, methods, and apparatuses for inspecting a tank containing a flammable fluid are provided. A vehicle configured to inspect the tank can include a propeller, a battery, a control unit, an inspection device, and a ranging device. The battery provides power to the propeller, the control unit, the inspection device, and the ranging device. The control unit generates a map of the tank and determines a first position of the vehicle on the map. The propeller moves the vehicle through the flammable fluid in the tank. The inspection device includes a pulsed eddy current array to obtain inspection data indicating a quality of a tank wall. The control unit causes the propeller to move the vehicle from the first position to a second position within the tank. The control unit obtains first inspection data indicating the quality of the tank wall, and stores the first inspection data.

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