

ABSTRACT

An inertial regulation active suspension system based on posture deviation of a vehicle and a control method thereof are provided. The system comprises a vehicle body, an inertial measurement unit, an electronic control unit, a servo controller group, a plurality of wheels, suspension servo actuating cylinders respectively corresponding to the wheels, and displacement sensors for measuring a stroke of the suspension servo actuating cylinders. The electronic control unit reads posture parameters of the vehicle body measured by the inertial measurement unit, and calculates a deviation between the postures of the vehicle body at a current moment and at a previous moment, and then outputs posture control parameters to the servo controller group. The servo controller group controls extension and retraction of each of the suspension servo actuating cylinders according to the posture control parameters and displacement feedback values of the displacement sensors.