

ABSTRACT

A position estimation system for a vehicle including a magnetic sensor which measures magnetism acting from a road surface side forming a surface of a traveling road to estimate an own vehicle position includes a map DB which stores a map (1) associated with a road-surface magnetic distribution (M2), which is a distribution of quantities of magnetism at respective points on the road surface, a magnetic distribution generation part which acquires magnetic measurement values from the magnetic sensor and generates a measured magnetic distribution, which is a distribution of magnetic measurement values, and a position estimation part which specifies an area corresponding to the measured magnetic distribution in the road-surface magnetic distribution (M2) associated with the map stored in the map DB and estimates the own vehicle position based on a position of the area corresponding to the measured magnetic distribution on the map.

Fig. 1