Claims

1. A modular placemark for robot movement characterized by comprising multiple modular zones having addresses of an entire region in which a robot moves, characterized in that the modular placemark further comprises 4 first magnetic strips in each modular zone:

a first magnetic strip (1), which has a polarity being north-pole or south-pole detectable by a magnetic induction sensor of a robot and the first magnetic strip (1) is arranged in a Y-axis direction;

a second magnetic strip (2), which has a polarity different from the polarity of the first magnetic strip and is arranged in a X-axis direction;

a third magnetic strip (3), which has the same polarity as the second magnetic strip (2) and is arranged in the X-axis direction; and

a fourth magnetic strip (4), which has the same polarity as the second magnetic strip (2) and the third magnetic strip (3) and is arranged in the Y-axis direction;

wherein, the polarity of the first magnetic strip (1) is a polarity of a surface of the first magnetic strip (1) facing the robot when the robot passes by the first magnetic strip (1) during running;

the polarity of the second magnetic strip (2) is a polarity of a surface of the second magnetic strip (2) facing the robot when the robot passes by the second magnetic strip (2) during running;

the polarity of the third magnetic strip (3) is a polarity of a surface of the third magnetic strip (3) facing the robot when the robot passes by the third magnetic strip (3) during running;

the polarity of the fourth magnetic strip (4) is a polarity of a surface of the fourth magnetic strip (4) facing the robot when the robot passes by the fourth magnetic strip (4) during running;

magnetic strips having different polarities are configured not to intersect, and magnetic strips having the same polarity are configured to intersect or not to intersect; and

first magnetic strip (1), the second magnetic strip (2), the third magnetic strip (3) and the fourth magnetic strip (4) are arranged in a cruciform shape.

2. The modular placemark for robot movement according to claim 1, wherein the lengths between a center of the cruciform shape and a distal-most end of each of the first magnetic strip (1), the second magnetic strip (2), the third magnetic strip (3), and the fourth magnetic strip (4) are the same.

3. The modular placemark for robot movement according to claim 1 or 2, wherein the magnetic strips are directly pasted onto the respective modular zones.

4. The modular placemark for robot movement according to claim 1 or 2, wherein each of the modular zones is provided with a magnetic material plate, wherein the magnetic material plate is directly magnetized to form the magnetic strip having the north-pole polarity or the south-pole polarity.

5. The modular placemark for robot movement according to claim 1 or 2, wherein the multiple modular zones are arranged in a matrix, and each modular zone has a square shape.

6. A placemark for robot movement, characterized by comprising the modular placemark for robot movement according to any one of claims 1-5, and further comprising address placemarks (5), wherein each of the modular zones is provided with a different address placemark (5).

7. The placemark for robot movement according to claim 6, wherein the address placemark (5) is a bar code, a two-dimensional code, a graphic mark, a color mark, a size mark, or an RFID mark.

8. A robot, moving on the placemark for robot movement according to claim 6 or 7, characterized in that a plurality of magnetic induction sensors and an address placemark identification device are mounted at a bottom of the robot, wherein

the plurality of magnetic induction sensors are configured to collect signals of the magnetic strips having different polarities,

the address placemark identification device is configured to collect information on the address placemarks,

the plurality of magnetic induction sensors and the address placemark identification device are connected with a robot controller, and

the robot is configured to move forward, move backward and/or make a turn according to instructions and the collected information on the address placemarks, to reach a target modular zone.

9. The robot according to claim 8, wherein the plurality of magnetic induction sensors are Hall sensors (6).

10. The robot according to claim 8, wherein the address placemark identification device is a camera or an RFID card reader.

11. The robot according to claim 9 or 10, wherein the plurality of Hall sensors are arranged in a form of square, and the address placemark identification device is located at a center of the square.

12. The robot according to claim 11, further comprising a low-remanence high-permeability material plate (7), the Hall sensors (6) are mounted to be close to the respective modular zones, and the low-remanence high-permeability material plate (7) is fixed above the Hall sensors (6) and close to the Hall sensors (6).

13. The robot according to claim 8, wherein the robot comprises a sorting robot and/or a robot for transporting and unloading goods, wherein the sorting robot and/or the robot for transporting and unloading goods are wirelessly connected with a server, and after receiving an instruction signal, move forward, move backward, and/or make a turn along a predetermined route to reach a target modular zone to load or unload goods.