

POSITION ESTIMATION DEVICE, CONTROL DEVICE, INDUSTRIAL
VEHICLE, LOGISTICS SUPPORT SYSTEM, POSITION ESTIMATION
METHOD, AND PROGRAM

5 Abstract

Abstract

Problem

Achieve more robust self-position estimation.

Solution

10 There is provided a position estimation device for estimating a position
of an industrial vehicle equipped with a laser scanner capable of acquiring point
cloud data by scanning a laser beam and a camera capable of acquiring an image
in a predetermined direction The position estimation device includes an
acquisition unit configured to acquire the point cloud data and the image, an
15 estimation unit configured to estimate the position of the industrial vehicle
based on at least one of the point cloud data and the image, and an extraction
unit configured to extract, from the point cloud data, valid point cloud data that
is usable for estimating the position. In a case where the number of pieces of
valid point cloud data is equal to or greater than a predetermined number, the
20 estimation unit estimates the position of the industrial vehicle by using the valid
point cloud data, and in a case where the number of pieces of valid point cloud
data is less than the predetermined number, the estimation unit estimates the
position of the industrial vehicle by using the image.
(FIG. 1)