

LOADING VOLUME RATIO MEASUREMENT APPARATUS, SYSTEM, METHOD AND PROGRAM

ABSTRACT

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A loading volume ratio measurement apparatus comprises:
acquiring a point group existing in a monitoring area; creating array
data obtained by using a voxel(s) in which a number of points of the
point group exist at a predetermined number or more into a valid
10 voxel(s) among voxels in voxel grids obtained by dividing the
monitoring area by a voxel having a voxel side length; calculating a
dead angle invalid voxel position information based on imaging part
mounting position information, field angle information of the imaging
part, the monitoring area, and the voxel side length; creating estimated
15 array data obtained by estimating a valid voxel(s) in a state excluding
an occlusion portion in which an obstacle(s) in the front hides a
measurement object(s) behind the obstacle(s) and makes the
measurement object(s) invisible, based on plurality of array data; and
when satisfying predetermined condition, validating all of the dead
20 angle invalid voxel(s) in the left or right or downward direction of the
frontmost valid voxel(s) in the estimated array data into a valid voxel(s).

Fig. 13