

first embodiment. For example, a standby path (a bypass path) other than the path 30 used for a usual travel may be arranged and used as the standby area 31.

[0076] As described above, the transport system 1 of the above embodiment includes more than one transport vehicle 10 and the management controlling apparatus 20. The transport vehicle 10 includes the tire 15 is made of resin and transports the item by traveling with the tire 15 in contact with the path 30. The management controlling apparatus 20 controls the travel of the transport vehicle 10. The management controlling apparatus 20 sets the standby position for the transport vehicle 10 whose continuous stoppage time exceeds the threshold, blocks at least the standby position in order to prevent another transport vehicle 10 from being located at the standby position, and makes the transport vehicle 10 travel to the standby position.

[0077] Accordingly, since the transport vehicle 10 does not stop continuously for a long period of time, the deformation of the tire 15 of the transport vehicle 10 can be prevented. Also, since the standby position is blocked, the transport vehicle 10 can travel smoothly to the set standby position.

[0078] In the transport system 1 of the above embodiment, the management controlling apparatus 20 measures the continuous stoppage time again after the transport vehicle 10 reaches the standby position and makes the transport vehicle 10 travel to the standby position other than the current standby position when the continuous stoppage time exceeds the threshold.

[0079] Accordingly, the transport vehicle 10 can be prevented from stopping for a long period of time even after it reached the standby position.

[0080] In the transport system 1 of the above embodiment, the management controlling apparatus 20 selects the standby position from more than one candidate for the standby position registered in advance and sets the selected standby position for the transport vehicle

reach each of the candidates for the standby position.

[0089] Accordingly, the selection of the standby position can be made with the energy that the other transport vehicle 10 consumes taken into account.

[0090] In the transport system 1 of the above embodiment, the transport vehicle 10 includes the rechargeable battery 14. The candidates for the standby position includes the charging position at which a charging apparatus that can charge the battery 14 of the transport vehicle 10 is provided.

[0091] Accordingly, the battery 14 can be charged using a standby time when the charging position is selected as the standby position.

[0092] In the transport system 1 of the above embodiment, the candidates for the standby position includes the position determined based on the travel histories of more than one transport vehicle 10.

[0093] Accordingly, the selection of the standby position can be made according to the current or past condition of the transport system 1.

[0094] In the transport system 1 of the above embodiment, when the continuous stoppage time of the transport vehicle 10 exceeds the threshold, the management controlling apparatus 20 blocks the first standby position and the second standby position that is a different position from the first standby position and makes the transport vehicle 10 travel to the first standby position or the second standby position. The management controlling apparatus 20 changes the position of the transport vehicle 10 between the first standby position and the second standby position each time the continuous stoppage time of the transport vehicle 10 exceeds the threshold.

[0095] Accordingly, since there is no need to search for another standby position after the first standby position and the second standby position are set, the computational load on the management controlling apparatus 20 can be reduced.

[0096] In the transport system 1 of the above embodiment, the first standby position and the second standby position are located on the same straight line in the path 30.

[0097] Accordingly, the position of the transport vehicle 10 can be changed between the first standby position and the second standby position simply by making the transport vehicle travel in a straight line.

[0098] In the transport system 1 of the above embodiment, the path 30 is arranged along the first direction and the second direction orthogonal to the first direction. When the continuous stoppage time exceeds the threshold, the management controlling apparatus 20 sets the current position of the transport vehicle 10 as the first standby position and, if the position adjacent to the first standby position in the first direction or in the second direction is available, the management controlling apparatus 20 sets the position adjacent to the first standby position as the second standby position.

[0099] Accordingly, since the first standby position and the second standby position are adjacent to each other, the distance that the transport vehicle 10 travels when the continuous stoppage time exceeds the threshold can be shortened.

[0100] In the transport system 1 of the above embodiment, the path 30 includes the standby area 31 for the transport vehicle 10 to stand by at. At least one of the first standby position or the second standby position is included in the standby area 31.

[0101] Accordingly, the transport vehicle 10 can be prevented from interfering with the transportation of the item by other transport vehicles 10 while the transport vehicle 10 stands by at the standby area 31.

[0102] The present embodiment includes following features 1 to 13.

[Feature 1]

A transport system, comprising:

more than one transport vehicle that includes a tire which is made of resin and