[0004]

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SUMMARY OF THE INVENTION

PROBLEMS TO BE SOLVED BY THE INVENTION

[0005]

From the viewpoints of storage and transportation of the flex container bag filled with a powder particle material, it has recently been demanded to further improve the handling property in addition to further increasing the filling rate of the powder particle material filling the flex container bag.

[0006]

Embodiments of the present invention provide a filling apparatus and a filing method for a powder particle material, each capable of further improving the handling property of the flex container bag filled with the powder particle material.

MEANS FOR SOLVING PROBLEMS

[0007]

Aspects of the filling apparatus and the filling method for a powder particle material of this invention are configured as follows.

[0008]

According to a first aspect of this invention, there is provided a filling apparatus for a powder particle material including a powder particle material supplying device that supplies the powder particle material to a flex container bag, a lifting device that lifts up the flex container bag arranged on a floor surface or a base bed therefrom, and a control device that is operable to control the lifting device to execute a tapping process that includes a lifting operation of lifting up the

flex container bag filled with the powder particle material by the powder particle material supplying device using the lifting device to cause the flex container bag to be distant from the floor surface or the base bed and a dropping operation of dropping the flex container bag by releasing the lifting by the lifting device to cause the flex container bag to collide with the floor surface or the base bed.

[0009]

According to a second aspect of this invention, there is provided a filling method for a powder particle material including a powder particle material filling step of filling the flex container bag with the powder particle material by supplying the powder particle material to the flex container bag, and a tapping step of executing a lifting operation of lifting up the flex container bag filled with the powder particle material to cause the flex container bag to be distant from the floor surface or the base bed thereabove and a dropping operation of dropping the flex container bag by releasing the lifting by the lifting operation to cause the flex container bag to collide with the floor surface or the base bed.

[0009a]

According to a third aspect of the present invention, there is provided a storage method for flex container bags including stacking on the flex container bags each other in a vertical direction in two or more tiers, each of the flex container bags being filled with a powder particle material in a filling amount of 500 kg to 1,500 kg using the above filling method for a powder particle material.

EFFECT OF THE INVENTION

[0010]

According to the filling apparatus and the filling method for a powder particle material as per embodiments of this invention, the handling property of the flex container bag