can accept reshaping and dispersion with damping, and can even disperse into smaller aggregates or individual grains; such a feature is a required feature for skiing, for it can provide required resistance for the skier to slow down, control the direction, and even brake.

By bonding a layer of material that can modify the surface performance of the magnetic solid grains to the magnetic solid grains, for example, by applying a macromolecular material layer or metal coating, the surfaces of the magnetic solid grains can be modified, so that the surfaces of the grains obtain a lubricating property, which is helpful for reducing the friction force between the grains and a ski-board; in addition, the interaction between natural snow grains and between natural snow and ski-board can be further simulated.

The present invention further provides a method for producing artificial snow at normal temperature, comprising the following steps:

(1) producing solid grains consisting of a main body made of a non-magnetic material and containing a magnetic material;

(2) using a mesh sieve to sieve the solid grains at a certain grain size; and

(3) magnetizing the solid grains obtained from the sieving by charging magnetism.

Preferably, the method further comprises the following step between the sieving step and the magnetization step: bonding a layer of material that can modify the surface performance of the solid grains obtained from the sieving to the surfaces of the ~~magnetized~~ solid grains obtained from the sieving.

Preferably, the material layer is a macromolecular material layer.

Preferably, the method further comprises: coloring the material layer which has been bonded to the solid grains.

The present invention further provides another method for producing artificial snow at normal temperature, comprising the following steps:

(1) Producing solid grains that contain a magnetic material;

(2) using a mesh sieve to sieve the solid grains that contain a magnetic material at a certain grain size; and

(3) magnetizing the solid grains obtained from the sieving by charging

magnetism.

Preferably, the method further comprises the following step between the sieving step and the magnetization step: bonding a layer of material that can modify the surface performance of the solid grains obtained from the sieving to the surfaces of the ~~magnetized~~ solid grains obtained from the sieving.

Preferably, the method further comprises: coloring the material layer which has been bonded to the solid grains.

Preferably, the step of producing solid grains that contain a magnetic material comprises: mixing a crushed or molten magnetic material with a molten material for the main bodies of the solid grains, and then pelleting, to obtain solid grains that contain a magnetic material.

Preferably, the step of producing solid grains consisting of a main body made of a non-magnetic material and containing a magnetic material further comprises: magnetizing the main body material by charging magnetism when the main body material is still in a molten state, and utilizing the strong magnetic force of a magnetic field to enable the magnetic material contained in the main body to align automatically orderly or enable the magnetic material contained in the main body to have the same polarity orientation.

The present invention is a pioneer invention for simulating natural snow, and has the following advantages.

1. The artificial snow at normal temperature disclosed in the present invention can simulate the features of natural snow well, is simple to produce and convenient to use, and can be used to substitute natural snow to create trails on a large scale.

2. The artificial snow at normal temperature disclosed in the present invention not only can be used to create trails solely formed by the artificial snow at normal temperature, but also can be used in mixture with natural snow to create trails.

3. With the artificial snow at normal temperature disclosed in the present invention, the operation time of a ski resort can be lengthened substantially, the cost of snow making in the ski resort can be reduced significantly, and the returns

the surfaces of the solid grains obtained from the sieving; and

(4) magnetizing the solid grains with the above-mentioned material layer by charging magnetism.

Please note: the step (3) can be excluded from the above method, if it is unnecessary to bond a layer of material that can modify the surface performance to the surfaces of the solid grains.

The material layer is preferably a macromolecular material layer, or a metal coating.

Furthermore, the above method can further comprise: coloring the material layer which has been bonded to the solid grains.

If the solid grains 2 of the artificial snow at normal temperature in the present invention are grains that have a main body made of a non-magnetic material and contain a magnetic material, the producing method can comprise the following steps:

(1) producing solid grains consisting of a main body made of a non-magnetic material and containing a magnetic material;

(2) using a mesh sieve to sieve the solid grains that have a main body made of a non-magnetic material and contain a magnetic material at a certain grain size; and

(3) magnetizing the solid grains obtained from the sieving by charging magnetism.

Furthermore, if surface modification is required for the obtained solid grains, the above method can further comprises the following step between the sieving step and the magnetization step: bonding a layer of material that modify the surface performance to the surfaces of the ~~magnetized~~ solid grains obtained from the sieving.

Furthermore, as required, the above method can further comprise: coloring the material layer which has been bonded to the solid grains.

When the solid grains 2 that have a main body made of a non-magnetic material and contain a magnetic material are produced, the main body of the solid grain can be a material selected from metal materials, organic materials, and inorganic non-metal materials; preferably, the solid grains that have a main body

made of a non-magnetic material and contain a magnetic material are obtained by mixing a crushed or molten magnetic material with a molten material for the main body and then pelleting. If the main body of the solid grain is made of an organic macromolecular material, as described above, the step of bonding a layer of material that can modify the surface performance to the surfaces of the ~~magnetized~~ solid grains obtained from the sieving is not a necessity.

In order to increase the dispersion damping among the solid grains that have a main body made of a non-magnetic material and contain a magnetic material, i.e., in order to increase the attractive force among the solid grains, in the process that a crushed or molten magnetic material is mixed with a molten material for the main body and then the mixture is pelleted, preferably the magnetization is carried out when the material for the main body is still in a molten state, and the strong magnetic force of a magnetic field is utilized to enable the magnetic material contained in the main body to align automatically orderly or enable the magnetic material contained in the main body to have the same polarity orientation.

For the two producing methods described above, the mesh size of the mesh sieve can be selected according to the expected grain size of the solid grains, for example, the mesh size can be 4-10mpi, more specifically 5mpi, 8mpi, or 9mpi, etc.

The artificial snow at normal temperature disclosed in the present invention can simulate the features of natural snow well, is simple to produce and convenient to use, simplifies the operation of creating a trail, and can substitute natural snow on a large scale in order to create a trail, thereby enabling a substantial reduction of the restrictions of environmental temperature and seasons on skiing, lengthening the operating time of a ski resort, and significantly increasing the returns of the ski resort.

Some embodiments of the artificial snow at normal temperature disclosed in the present invention are described above. As stated above, the specific features of the artificial snow at normal temperature disclosed in the present invention, such as shape and size, can be designed specifically on the basis of the features