The invention relates to a sliding board, particularly a ski, comprising a sliding surface (5), an upper shell (4), a core (3), optional steel edges (6), an upper belt (16) and a lower belt (7), and comprising at least one interface element (10), which is joined to the sliding board body and which is provided for mounting at least one binding element on the top surface of the sliding board. The sliding board has been constructed with a core (3,3') that is joined in a fixed manner to the interface element(s) (10, 10').
SLIDING BOARD, PARTICULARLY A SKI, AND METHOD FOR THE PRODUCTION THEREOF

[0001] The invention relates to a sliding board, particularly a ski, with a running surface, an upper shell, a core, optionally with steel edges, an upper flange and a lower flange, and with at least one interface element connected to the sliding board body and intended for arranging on at least one binding element on the upper side of the sliding board.

[0002] The invention also relates to a method for the production of a sliding board, particularly a ski, in which a running surface, optionally steel edges, a core and an upper shell, optionally also an upper flange and a lower flange, are built up in layers and interconnected or pressed together under pressure and heat in a mold.

[0003] EP-A-1 616 972 discloses a sliding board with a profiled rail system which comprises at least one rail extending in the longitudinal direction of the sliding board, which is connected to the sliding board body by a peg connection or anchorage by means of at least one formed-on peg or part of a peg. The fastening of the profiled rails is performed on the finished sliding board and consequently just replaces the otherwise customary screw fastening. In order to provide a sliding board with an already premounted profiled rail system, it is therefore necessary to carry out fastening and mounting operations on the finished sliding board.

[0004] The invention is based on the object of providing a sliding board which does not have this disadvantage.

[0005] The set object is achieved according to the invention by the sliding board having been constructed with a core which is firmly connected to the interface element or elements.

[0006] According to the method as provided by the invention, openings which are receiving locations for anchoring elements of an interface element are created both in the core and in the components of the sliding board that are provided above the core, the anchoring elements are anchored with a form fit and/or frictional engagement in the receiving openings, the sliding board is constructed in its final form, introduced into the mold and subjected to the pressing operation.

[0007] According to the invention, the interface elements, which represent the connection to the binding parts to be arranged on the sliding board, are therefore incorporated or integrated in the construction of the sliding board during its production. Therefore, no fastening operations, such as screwing-on operations for example, on the finished sliding board are required any longer for the interface elements. The production of the sliding board is also very simple and, in particular, the activities of arranging bindings, ski bindings or snowboard bindings or their parts, are rationalized considerably.

[0008] In the case of a preferred embodiment, the anchoring element or elements has or have already been connected to the core with a form fit and/or frictional engagement during the production of the sliding board, before the pressing operation in a mold. Mechanical connections, which may be both releasable and unreleasable, are suitable in particular for connecting the anchoring elements to the core.

[0009] In the case of a preferred embodiment of the invention, the anchoring element or elements is or are anchored in the core in the manner of a peg. Simple handling during the production of the sliding board is obtained if the openings in the core pass through the core completely, so that the anchoring elements can be fixed from the underside of the core.

[0010] In the case of another embodiment of the invention, it may be provided that the anchoring elements are anchored in the receiving openings in the core in the manner of rivets.

[0011] The interface element provided with the anchoring elements may be a guiding element configured in the manner of a profiled rail or have such a guiding element. According to another embodiment, the interface element may also be a plate for arranging binding parts or a component part of the binding.

[0012] Particularly well suited for anchoring the anchoring elements of the interface elements are cores made of wood and/or plastic.

[0013] In the case of another configuration according to the invention, the core is a body provided with at least one cavity. The sliding board body may be correspondingly configured in a flexurally rigid manner from the outset, so that the construction of the sliding board can be simplified.

[0014] In the case of this embodiment, it is of advantage for simple production if the core is incorporated by means of prepreg layers.

[0015] The at least one cavity in the core may be filled with foam or left hollow.

[0016] Further features, advantages and details of the invention are described in more detail on the basis of the drawing, which schematically represents two exemplary embodiments and in which:

[0017] FIG. 1 shows a cross section through an embodiment of a ski configured according to the invention and

[0018] FIG. 2 shows a longitudinal section along the line II-II of FIG. 1 through a partial region of the ski from FIG. 1 and

[0019] FIG. 3 shows a cross section through another configurational variant of a ski configured according to the invention.

[0020] The ski 1, shown in cross section in FIG. 1, has a core 3, an upper shell 4, forming the upper side of the ski and the longitudinal side of the ski 1, a running surface 5, edges 6 made of steel and a lower flange 7 arranged between the latter. The core 3 consists of wood sheathed with a prepreg layer 2. The prepreg layer 2 comprises in a known way a fabric, scrim or the like of fibers, preferably glass or aramid, embedded in a polymer material, for example epoxy resin or phenolic resin. The sheathed core 3 forms what is known as the torsion box of the ski 1. A further layer, reinforcing the ski construction, the upper flange 8, is located between the upper shell 4 and the prepreg layer 2. The further construction of the ski 1 may comprise additional layers (not represented) and intermediate layers of different materials. All the parts of the ski 1 are, in particular, preformed and prefabricated parts.
[0021] In the core 3 and in the components of the ski 1 provided above the core 3, at least one anchoring element 9 of a guiding element 10 profiled with a rail-like shape is inserted in the core 3 and held in the core 3 in those regions where a ski binding part or the like is to be arranged. In the case of the embodiment represented, as shown in FIG. 2, for each guiding element 10 there are a number of anchoring elements 9, which are formed on the guiding element 10. As FIG. 1 in particular shows, the anchoring elements 9 are provided at their free end region with an outwardly widening slot 9a. The anchoring elements 9 are inserted in receiving locations 8, which are created by openings both in the core 3 and the ski components provided above the core 3, so that fit each anchor profiled element 9a, which respectively face toward the receiving location adapted to it. In the core 3, the receiving location 8 goes over into a widened opening 11, which also passes through the prepreg layer 2 optionally sheathing the core 3 at this location. The anchoring elements 9 of the guiding elements 10 can consequently be positioned in the receiving locations 8 during the construction of the ski 1 and a spreading part or pin 12 can subsequently be knocked into the slot 9a of the anchoring element 9 from below via the widened opening 11.

[0022] In this way, the anchoring element 9 is spread open somewhat and pressed against the core material. The ski 1, completed with all the component parts, is subsequently placed in a mold and pressed while pressure and heat are supplied. As this happens, the resin material of the prepreg layers 2 and the upper shell 4 also enter into a connection with the guiding elements 10. The pins 12 or the slots 9a are configured in such a way that a firm fit of the pins 12 in the slots 9a is ensured.

[0023] The anchoring elements 9 formed on the rail-like guiding elements 10 may also be anchored in the receiving locations 8 in some other way. Pressing into correspondingly shaped receiving openings 8 in the core 3 or fixing of the anchoring elements 9 in the manner of rivets is possible.

[0024] In the case of the embodiment shown in FIG. 1, a pair of guiding elements 10 profiled with a rail-like shape is provided for each ski binding part (not shown). Instead of the guiding elements 10 that are shown, one-part profiled rails, base plates with any desired positioning and fixing devices for ski binding parts or other plates may also be provided with the anchoring elements 9.

[0025] The guiding elements 10 profiled with a rail-like shape that are shown in FIGS. 1 and 2 are, in particular, steel or plastic profiles which are provided with laterally attached profiled elements 10a, which respectively face toward the side edges of the ski and allow the base plate or some other binding part to be slid on. It goes without saying that any other desired configurations of the rail-like guiding elements are possible.

[0026] The rail-like guiding elements 10 also have supporting regions 13, by means of which the guiding elements 10 rest on the upper shell 4. In this case, the guiding elements 10 cover over the openings in the upper shell 4 completely.

[0027] The core of the ski 1 shown in FIGS. 1 and 2 may also consist of different materials. Instead of a core made of wood, cores made of plastic or of a laminated composite material and the like may be used.

[0028] In the case of the embodiment shown in FIG. 3, the ski 1' has an upper shell 4', a running surface 5', steel edges 6' and a lower flange 8' running between the latter. The core 3' has a hollow body, on which there are formed guiding elements 10' profiled with a rail-like shape, which run on the upper side of the ski 1'. The core 3' is provided with a single, large-volume cavity 17, which is filled with foam. In the case of the embodiment represented, the core 3' is sheathed by a prepreg layer 2', which is provided with corresponding openings in the region of the guiding elements 10' profiled with a rail-like shape. The upper shell 4' and the upper flange 8' have also been provided with openings, so that the upper flange 8' and the upper shell 4' can be positioned on the core 3' when the ski 1' is being constructed from the individual layers. As in the case of the embodiment according to FIG. 1, the unfinished ski 1', constructed from the correspondingly preformed and prefabricated parts, is placed in a mold and pressed while pressure and heat are supplied. Before or during the pressing operation, the cavity 17 of the core 3' is filled with foam material; the supply channels required for this purpose are laid in the ski while it is being constructed and are not represented. In the case of this embodiment, the core 3' that is shown may be provided just in that region of the ski 1' where the guiding elements 10' profiled with a rail-like shape are required.

[0029] Instead of a single cavity, the core 3' may also be provided with a number of cavities. It should also be mentioned that it is also possible to dispense with filling the cavity or cavities in the core 3'.

[0030] The invention has been described on the basis of a ski. It goes without saying that the invention may also be applied in the case of other sliding boards, for example snowboards.

1. A sliding board, particularly a ski, with a running surface, an upper shell, a core, optionally with steel edges, an upper flange and a lower flange, and with at least one interface element connected to the sliding board body and intended for arranging at least one binding element on the upper side of the sliding board, characterized in that the sliding board has been constructed with a core (3, 3') which is firmly connected to the interface element or elements (10, 10').

2. The sliding board as claimed in claim 1, characterized in that formed on the interface element or elements (10) are anchoring elements (9) which has or have already been connected to the core (3) with a form fit and/or frictional engagement during the production of the sliding board, before the pressing operation in a mold.

3. The sliding board as claimed in claim 1 or 2, characterized in that openings or bores which from receiving locations (8) for the anchoring elements (9) have been created in the core (3) and the sliding board components arranged above the core (3).

4. The sliding board as claimed in one of claims 1 to 3, characterized in that the anchoring element or elements (3) is or are connected by means of mechanical, releasable or unreleasable connections.

5. The sliding board as claimed in one of claims 1 to 4, characterized in that the anchoring element or elements (9) is or are anchored in the core (3) in the manner of a peg.
6. The sliding board as claimed in one of claims 1 to 4, characterized in that the anchoring element or elements is or are anchored in the receiving openings of the core in the manner of rivets.

7. The sliding board as claimed in one of claims 1 to 5, characterized in that the interface element provided with the anchoring elements (9) is a guiding element (10) configured in the manner of a profiled rail.

8. The sliding board as claimed in one of claims 1 to 7, characterized in that the interface element is a plate for arranging binding parts.

9. The sliding board as claimed in one of claims 1 to 7, characterized in that the interface element is a component part of the binding.

10. The sliding board as claimed in one of claims 1 to 9, characterized in that the core (3) consists of wood and/or plastic.

11. The sliding board as claimed in claim 1, characterized in that the core (3) is a body (16), in particular provided with at least one cavity (17), on which the interface element or elements (10') is or are formed.

12. The sliding board as claimed in claim 1 or 11, characterized in that the core (3') is incorporated by means of one or more prepreg layers (7').

13. The sliding board as claimed in one of claims 1, 11 or 12, characterized in that the cavity (17) is filled with foam.

14. The sliding board as claimed in one of claims 1 or 11 to 13, characterized in that the interface elements are guiding elements (10) profiled with a rail-like shape.

15. A method for the production of a sliding board, particularly a ski, in which a running surface, optionally steel edges, a core and an upper shell, optionally also an upper flange and a lower flange, are built up in layers and interconnected or pressed together under pressure and heat in a mold, characterized in that openings which are receiving locations (8) for anchoring elements (9) of an interface element (10) are created both in the core (3) and in the components (9) of the ski that are provided above the core (3), the anchoring elements (9) are anchored with a form fit and/or frictional engagement in the receiving openings (8), the sliding board is constructed in its final form, introduced into the mold and subjected to the pressing operation.

16. The method as claimed in claim 15, characterized in that the openings in the core (3) pass through the core (3) completely, so that the anchoring elements (9) can be fixed from the underside of the core.

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