Claims

1. A transport and storage system for metal coils for receiving cylindrical sheet metal coils, in particular horizontally oriented ones, wherein at least one module (8, 9) is present, which is formed from a stack of corrugated cardboard, wherein the liners (1, 4, 6) of the corrugated cardboard layers are oriented so that they extend substantially perpendicularly to a receiving surface (11) of the module (8, 9), characterized in that the transport and storage system has at least one base module (8) and at least one insert module (9) for insertion into the base module (8), wherein the insert module (9) has contact surfaces (10) for contacting the base module (8) and receiving surfaces (11) for receiving the metal coil.

2. The transport and storage system according to claim 1, characterized in that the insert module (9) engages in the base module (8) in a tongue-and-groove-like or plug-like manner.

3. The transport and storage system according to claim 2, characterized in that the height of the engaging region (35) corresponds to more than 10%, in particular more than 20%, of the height of the base module (8).

4. The transport and storage system according to claim 2, characterized in that the height of the engaging region (35) corresponds to less than 25%, in particular less than 20%, preferably less than 10%, of the height of the base module (8).

5. The transport and storage system according to claim 2 or claim 3 or claim 4, characterized in that the width of the engaging region (35) corresponds to between 20% and 60% of the width of the base module (8).

6. The transport and storage system according to one of the preceding claims, characterized in that the base module (8) is made of a different corrugated cardboard quality, in particular a higher corrugated cardboard quality, than the insert module (9).

7. The transport and storage system according to one of the preceding claims, characterized in that the insert modules (9) are embodied extending over a total length of more than 30%, in particular more than 40%, particularly preferably more than 50% of the coil width.

8. The transport and storage system according to one of the preceding claims, characterized in that the corrugated cardboard for forming the modules (8, 9), or the stacks of corrugated cardboard, or the corrugated cardboard and the stacks formed therefrom are glued together in a waterproof manner.

9. The transport and storage system according to one of the preceding claims, characterized in that the material for the liners (1, 4, 6) of the corrugated cardboard is a kraft liner and/or the corrugated webs (2, 5) are made of semichemical pulp or bogus paper.

10. The transport and storage system according to one of the preceding claims, characterized in that the liners (1, 4, 6) and the corrugated layers (2, 5) are glued in a moisture-resistant and in particular waterproof manner.

11. The transport and storage system according to one of the preceding claims, characterized in that the corrugated cardboard layers are combined to form corrugated cardboard stacks which are glued together over their entire surface by means of the liners (1, 3, 6) so that an at least two-flute, in particular more than three-flute, preferably more than ten-flute, and even more preferably more than twenty-flute composite or stack is formed.

12. The transport and storage system according to one of the preceding claims, characterized in that the paper material forming the corrugated cardboard is equipped or bonded in a way that makes it moisture-resistant and/or fungicidal.

13. The transport and storage system according to one of the preceding claims, characterized in that the base module (8) is embodied as U-shaped in cross-section, with a bottom wall (15) and two side walls (16) extending orthogonal therefrom.

14. The transport and storage system according to one of the preceding claims, characterized in that orthogonal to the cross-section, the base module (8) has a length that corresponds to the length of a coil to be received or that is shorter or longer than it, or the base module (8) has the basic dimensions of a standard pallet, i.e. is 800 x 1200 mm in size, wherein on the underside in the bottom wall (15), the base module (8) has openings for being engaged by forklifts or for a tongue-and-groove system to allow the base modules (8) to be stacked on top of one another by means of their bottom walls.

15. The transport and storage system according to one of the preceding claims, characterized in that in order to contain a coil on all sides, the arrangement composed of a base module (8) and at least one insert module (9) is conversely placed onto the coil from above, wherein the base modules (8) rest against one another with end surfaces (20) of their side walls (16) or are spaced apart from one another by 1 mm to 100 mm, in particular 5 mm to 25 mm, wherein the base module (8) has tongues and grooves on end surfaces (20) of the side walls (16) in order for it and an identically embodied base module (8) to reciprocally fit into each other when their end surfaces (20) rest against each other, and wherein the insert module (9) is embodied as triangular in cross-section, with a flat receiving surface (11) or conversely has a cut out region that is triangular in cross-section, forming two receiving surfaces (11), wherein the opening of the triangular cut-out faces upward and is wider than the diameter of a coil.

16. The transport and storage system according to one of the preceding claims, characterized in that at least two insert modules (9) are provided, which are embodied as triangles in cross-section and in particular as regular right triangles in which the triangle legs define a right angle with each other, wherein two insert modules (9) are positioned opposite each other, wherein one leg (17) rests with its contact surface (10) on a bottom wall (15) of the base module (8) and a vertical leg (18) rests with its contact surface (10) against a side wall (16) of the base module (8), and wherein in order to fill a distance between the base module (8) and a transport container wall, modules are positioned between the base module (8) and a transport container wall.

17. The transport and storage system according to one of the preceding claims, characterized in that at least one insert module (9) is provided, wherein the at least one insert module (9) has at least one receiving surface (11) that is concave or elliptically curved and in particular, is embodied as a cylinder circumference segment, wherein the insert module (9) has a width that corresponds to the inner width between the side walls (16) of the base module (8) so that the base module (8) is able to receive the insert module (9) with a positive fit.

18. The transport and storage system according to one of the preceding claims, characterized in that the size of the triangular insert modules (9) or the radius of the concave receiving surface (11) is adapted to the diameter of a coil that is to be received or the elliptical curvature of the receiving surface (11) is adapted so that it deviates from the outer radius of the coil by at most 100 mm, in particular by at most of 50 mm.

19. A use of a transport and storage system according to one of the preceding claims for rail, truck, or maritime transport or for storage of metal coils in a building.