



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
23.07.2008 Bulletin 2008/30

(51) Int Cl.:
B63B 5/10 (2006.01)

(21) Application number: **08100546.4**

(22) Date of filing: **16.01.2008**

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT
RO SE SI SK TR**
Designated Extension States:
AL BA MK RS

(71) Applicant: **A/S Henning Frokjaer, Tomrer- og
Snedkerentrepriser
6715 Esbjerg N (DK)**

(72) Inventor: **Freund, Johnny
6710 Esbjerg V (DK)**

(30) Priority: **17.01.2007 DK 200700068**

(74) Representative: **Nielsen, Leif
Patrade A/S
Fredens Torv 3A
8000 Århus C (DK)**

(54) **Deck covering**

(57) The present invention concerns a covering of the type typically used on decks of ships, where the covering includes solid wood.

The covering according to the invention is constituted by one or more prefabricated plate-shaped elements, where the prefabricated element is made up of at least two layers, where the top layer includes a plurality of solid wooden planks, where the planks are glued to an under-

lying layer, and where the bottom layer is constituted by a dimensionally stable plate intended for bonding onto the deck of the ship.

By such a type of covering, many elements may be produced in a relatively short period of time under optimal conditions; e.g. in a workshop. The purpose of making these elements is that production time is minimised and that a better quality of the covering is achieved while at the same time the solution is cheaper.

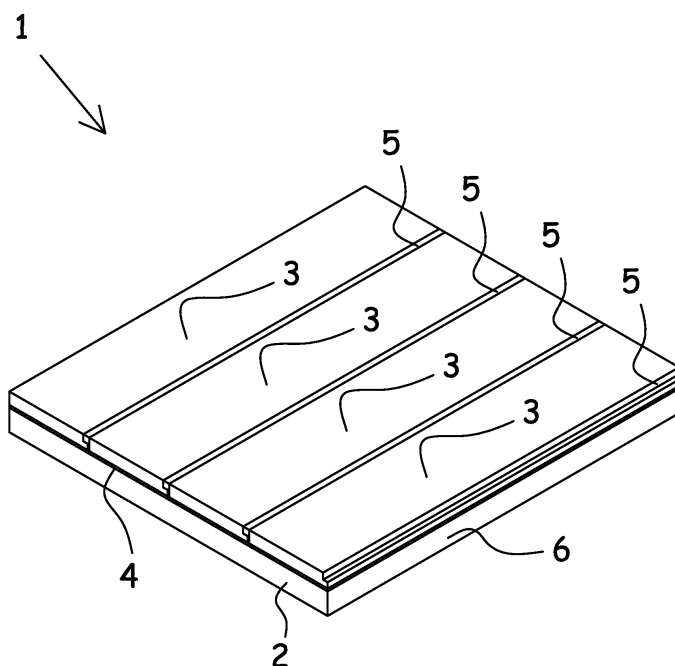


Fig. 1

Description

Field of the Invention

[0001] The present invention concerns a covering of the type typically used on decks of ships, where the covering includes solid wood.

Description of Prior Art

[0002] It is commonly known that a wooden covering is mounted on decks of ships. Typically, such a covering is made of teak as this kind of wood naturally contains oils causing the wood to be robust and thus suited for a frequently wet environment. In order to compensate for movements of the wood due to varying humidity, such coverings are often fitted with elastic joints between the planks. Such coverings made of teak wood appear as a smart, elegant and maritime solution, and there is a great tradition for this type of covering on ships used for cruises and for yachting. In many other places this type of covering is used also.

[0003] A traditional deck made of teak wood is built up with planks that are laid individually on the deck and glued to the surface of the deck, which typically consists of steel plates. Such a surface of steel plates can be somewhat uneven and is therefore to be filled partly or entirely, thus achieving a surface without any dents or hollows of more than two to three millimetres. A suitable glue is applied on the filled steel deck, and the wooden planks are mounted. After finishing the mounting of the planks, pointing between the planks is often done, after which the entire teak deck is grinded and possible finishing treatment is performed.

[0004] This kind of laying of deck planks has been used for many years and the work is time-consuming, which is expensive. In connection with new building of ships of all types, the time used for building the ships of course has considerable influence on the price of the ship, and by renovating of decks of cruise ships it is of course important that the deck covering of the ships can be mounted rapidly and perfectly, so that the ship, or the area concerned on the ship, may come into operation as quickly as possible.

[0005] It is the object of the invention to indicate a deck covering which is robust, readily mounted and which is cheaper than the prior art types.

Description of the Invention

[0006] As mentioned, the invention indicates a covering of the type typically used on decks of ships, where the covering includes solid wood. The covering according to the invention is constituted by one or more prefabricated plate-shaped elements, where the prefabricated element is made up of at least two layers, where the top layer includes a plurality of solid wooden planks, where the planks are glued to an underlying layer, and where

the bottom layer is constituted by a dimensionally stable plate intended for bonding onto the deck of the ship.

[0007] By such a type of covering, many elements may be produced in a relatively short period of time under optimal conditions, e.g. in a workshop. The purpose of making these elements is to minimise the production time and to achieve a better quality of the covering while at the same time providing a cheaper solution. The better quality is achieved in that the conditions in a workshop are much easier to control, as well as, for example, it is much easier to apply a desired pressure on the pieces to be glued together. Another advantage is that pointing between the individual planks and the subsequent pointing can be performed by machine, rapidly and consequently cheaply.

[0008] A preferred variant of a covering according to the invention is where the dimensionally stable plate is made of a cement product which is reinforced by fibres, preferably a plate of Minerit. By using such a plate, a strong solution is attained with the required strength at a relatively small thickness. The dimensionally stable plate can be with a thickness of 3 to 10 mm, but in a preferred embodiment with a thickness of 6 mm.

[0009] Another advantage of such a plate is that it cannot burn. If an accident should occur, where a fire breaks out and the fire spreads to the deck planks, there is less inflammability by a covering according to the invention, as the planks have a thickness which is less than planks mounted directly upon a steel deck. Thus there not so much inflammable material is used.

[0010] A covering according to the invention may advantageously be used so that adjacent prefabricated covering elements after laying are pointed at joints between the elements. It is thus only joints between adjacent elements that are to be made after during the laying of the covering.

[0011] A preferred variant of the covering according to the invention is where the outermost wooden planks are mounted after laying the prefabricated element, and preferably after individual adaptation of the wooden planks. Hereby is achieved possibility of adapting the elements to specific conditions. A covering according to the invention may e.g. advantageously be applied onboard cruise ships on balconies at the cabins of the ship. The prefabricated elements may advantageously be adapted to the individual standard balconies, and in connection with the mounting the final adaptation is made where e.g. the outermost planks along the edges are adapted to the specific balcony as well as planks at a possible floor drain are adapted onsite. By such a solution is achieved that bonding is only to be performed between steel deck and the prefabricated covering element, followed by the said individual adaptation along edges and the like.

A covering according to the invention may advantageously be with wooden planks that have a thickness between 2 and 15 mm, preferably between 3 and 5 mm. As covering elements according to the invention are suited for application on much frequented as well as less

frequented areas on e.g. a cruise ship, the thickness of the planks (the wear layer) may advantageously be varied according to the need of the area in question. For example, a great thickness may advantageously be applied on promenade decks, at bars and in pool areas, while on balconies and other less frequented areas a somewhat lesser thickness of wooden plank may be applied.

Short Description of the Drawing

[0012] The invention is described in more detail with reference to the drawing, where:

FIG. 1 shows a covering according to the invention. 15

Detailed Description of the Invention

[0013] In Fig. 1 is seen a prefabricated plate element 1 according to the invention, where the plate element 1 includes a dimensionally stable plate 2, which is typically made of a cement product reinforced by cellulose fibres, synthetic fibres or other types of fibres, e.g. a plate of Minerit. Solid wooden planks 3 are mounted upon the plate 2, secured to the plate 2 by a layer of glue 4. The solid wooden planks 3, which advantageously can be made of teak wood, are made with a joint 5 along one side, and subsequently to mounting on the plate 2, the joint 5 is filled with an elastic joint filler. Along the side 6 of the plate element 1, the joint 5 is not filled with joint filler. This joint 5 is only filled after mounting the plate element at the side of a loose wooden plank 3 or an adjacent prefabricated plate element 1. 20 25 30

[0014] By these prefabricated plate elements 1, a rapid and easy mounting is achieved, where only very little pointing work is to be performed at the site of mounting. 35

Claims

1. A covering of the type typically used on decks of ships, where the covering includes solid wood, **characterised in that** the covering is constituted by one or more prefabricated plate-shaped elements, that the prefabricated element is made up of at least two layers, where the top layer includes a plurality of solid wooden planks, that the planks are glued to an underlying layer, and that the bottom layer is constituted by a dimensionally stable plate intended for bonding onto the deck of the ship. 40 45 50
2. Covering according to claim 1, **characterised in that** the dimensionally stable plate is made of a cement product which is reinforced by fibres, preferably a plate of Minerit. 55
3. Covering according to any of claims 1 and 2, **characterised in that** adjacent prefabricated covering

elements after laying are pointed at joints between the elements.

4. Covering according to any of claims 1 -3, **characterised in that** the outermost wooden planks are mounted after laying the prefabricated element, and preferably after individual adaptation of the wooden planks.

5. Covering according to any of claims 1 -4, **characterised in that** the wooden planks have a thickness between 2 and 15 mm, preferably between 3 and 5 mm.

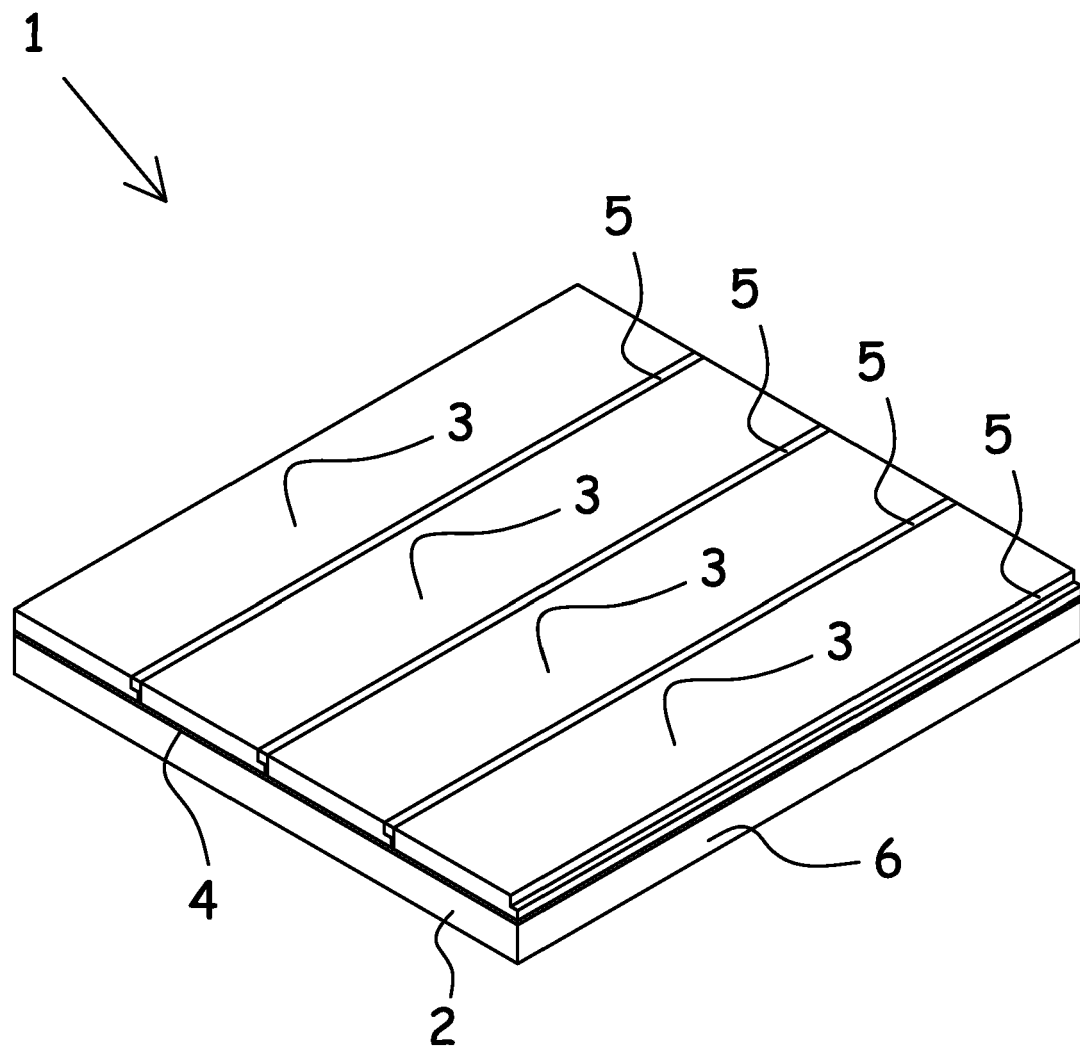


Fig. 1



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 08 10 0546

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2006/283140 A1 (KENNEDY STEPHEN J [CA]) 21 December 2006 (2006-12-21)	1,3-5	INV. B63B5/10
Y	* paragraphs [0018] - [0030]; figures * -----	2	
X	EP 1 316 497 A (WOLZ ANDREAS [DE]; WOLZ MICHAEL [DE]) 4 June 2003 (2003-06-04)	1,5	
Y	* paragraphs [0026] - [0033]; figures * -----	2	
Y	GB 1 469 276 A (SADASHIGE FANCY PLYWOOD IND CO) 6 April 1977 (1977-04-06)	2	
Y	* page 5, lines 11-40 * -----		
A	EP 0 518 764 A (SCHAUMAN WOOD OY [FI]) 16 December 1992 (1992-12-16)	1-5	
	* abstract; figures * -----		
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			B63B
Place of search		Date of completion of the search	Examiner
Munich		16 May 2008	Moya, Eduardo
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

2
EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 08 10 0546

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

16-05-2008

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 2006283140	A1	21-12-2006	NONE	
EP 1316497	A	04-06-2003	DE 10158183 A1	12-06-2003
GB 1469276	A	06-04-1977	DE 2412881 A1	03-04-1975
			FR 2243794 A1	11-04-1975
			IT 1009330 B	10-12-1976
			MY 979 A	31-12-1979
EP 0518764	A	16-12-1992	DE 69202521 D1	22-06-1995
			DE 69202521 T2	12-10-1995
			JP 5170169 A	09-07-1993
			NO 922194 A	11-12-1992
			SI 9200101 A	31-12-1992