

TITLE OF THE INVENTION

COLOR-PRINTING LAMINATED BOARD WITH ANTI-COUNTERFEITING FUNCTION AND THE METHOD OF FABRICATING THE SAME

BACKGROUND OF THE PRESENT INVENTION

(a) Field of Technical Art

The present invention relates to a color-printing laminated board with anti-counterfeiting function and the method of fabrication of the laminated board.

(b) Background of the invention

Conventionally, colored metallic board is obtained by carry out a color printing process on the surface of a metal, and after that a shining liquid is coated onto the surface of the colored metal. This fabrication method of a colored metallic surface can be easily scratched, which leads to corrosion and rust of the metallic surface, and accordingly leakage is formed to the metallic board. In addition, surface printing technology is employed and the product thus obtained cannot provide the function of anti-counterfeiting. In other words, no anti-counterfeiting mark can be made to the metallic board in the course of production. Plastic material is employed to solve the problem caused by rusting or corrosion, but due to its strength and hardness restriction, the scope of application is restricted. In addition, there are drawbacks with respect to production process and pollution in the course of application, and also not recyclable being a waste of resources.

SUMMARY OF THE PRESENT INVENTION

Accordingly, it is an aspect of the present invention to provide color-printing laminated board which prevents counterfeiting characterized in that the laminated board comprising a board material; a laminating layer, wherein the laminating

layer is laminated on the surface of the board material; an adhesion layer; a color-printing layer; and a plastic material layer

Yet another aspect of the present invention is to provide a method of fabricating a laminated board which prevents counterfeiting comprising the steps of

- (a) printing pattern or anti-counterfeiting mark on a plastic material layer to obtain a colored printing plastic material layer;
- (b) proceeding the plastic material layer to a laminating device and subsequently to a coating device;
- (c) coating a laminating agent onto the plastic material layer and proceeding the layer to the laminating device;

laminating a plurality of plastic membranes onto the two surfaces of the board material to obtain the colored printed laminated board

Still another object of the present invention is to provide a color printing laminated board, wherein the adhesion layer is a rubber adhesive evenly coated onto the bottom surface of the color printing layer so that the plastic material layer is laminated integrally with the board material as one unit

A further object of the present invention is to provide a color printing laminated board, wherein the color printing layer includes a required pattern or an anti-counterfeiting mark printed onto the bottom layer of the plastic material layer

The advantages of the color-printing laminated board with anti-counterfeiting function are as follows:

- (a) possessing excellent anti-counterfeiting function;
- (b) possessing scratching-resistance function;
- (c) possessing leaking function;
- (d) possessing rust-resistant and corrosion-resistant function;
- (e) possessing excellent strength and hardness;
- (f) providing attractive printing effect; and

- (g) flexibility of selection of required materials.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a schematic view of a color-printing laminated board in accordance with the present invention.

FIG. 2 is a flow-chart showing the fabrication process in accordance with the present invention.

DETAILED DESCRIPTION OF THE INVENTION

Referring to FIG. 1, there is shown a schematic view of a color-printing laminated board of the present invention comprising a base material 4 and laminating layers which include an adhesive layer 3 (5), a color-printing layer 2 (6), and a plastic layer 1 (7) laminated in sequence to both sides of the base material. The color-printing layers 3 (5) print a required pattern or an anti-counterfeiting indication onto the bottom surface of the plastic layer 1 (7). Generally, a transparent plastic film is used as the plastic layer 1 the lustrous and transparency of the plastic film enhance printing efficacy and anesthetic pattern is thus obtained, and the anti-counterfeiting mark will not be replaced or damaged.

The adhesive layer 3 (5) is a strong adhesion with strong adhesive force and is evenly coated at the bottom surface of the color-printing layer 2 (6). Accordingly the plastic layer 1 (7) with color-printing layer 2 (6) is laminated to the base material 4.

Referring to FIG. 2, the fabrication method comprises the following steps:

- (a) printing a pattern or an anti-counterfeiting mark onto the plastic material layer using a printing device so as to obtain a color-printing layer including the plastic material 1 (7) and the color-printing layer 2 (6);
- (b) preparing a base material 4 for laminating with the plastic material layer in a laminating device;
- (c) preparing a plurality of plastic material for processing at a coating device;

- (d) coating a laminating agent onto the color-printing layer 2 (6) by the coating device to obtain a laminated layer including an adhesive layer 3 (5) and the plastic material, and transferring the color-printing layer 2 to the laminating device;
- (e) laminating the plastic material onto the two surfaces of the base material 4 by the laminating device to obtain color-printing laminated board material; and
- (f) cutting the color-printing laminated board material using a cutter to desirable sizes.

In addition, in order to proceed with soldering process to the laminated board material, prior to transferring the laminated layer into the laminating device, the slit-forming method is employed to the plastic material so that the laminated board material is provided with a slit which allows soldering process.

While certain novel features of this invention have been shown and described and are pointed out in the annexed claim, it is not intended to be limited to the details above, since it will be understood that various omissions, modifications, substitutions and changes in the forms and details can be made by those skilled in the art without departing in any way from the spirit of the present invention.

CLAIMS

1. A color-printing laminated board which prevents counterfeiting characterized in that the laminated board comprises:
a board material;
a laminating layer, wherein the laminating layer is laminated on the surface of the board material;
an adhesion layer;
a color-printing layer; and
a plastic material layer.
2. The laminated board of claim 1, wherein the top and bottom surface of the board material are laminated correspondingly with the laminating layer.
3. The laminated board of claim 1, wherein the color printing layer includes a required pattern or an anti-counterfeiting mark printed onto the bottom layer of the plastic material layer.
4. The laminated board of claim 1, wherein the adhesion layer is a rubber adhesive evenly coated onto the bottom surface of the color printing layer so that the plastic material layer is laminated integrally with the board material as one unit.
5. A method of fabricating a laminated board which prevents counterfeiting comprising the steps of
 - (d) printing pattern or anti-counterfeiting mark on a plastic material layer to obtain a colored printing plastic material layer;
 - (e) proceeding the plastic material layer to a laminating device and subsequently to a coating device;
 - (f) coating a laminating agent onto the plastic material layer and proceeding the layer to the laminating device;

- (g) laminating a plurality of plastic membranes onto the two surfaces of the board material to obtain the colored printed laminated board.
- 6. The method of claim 5, further comprising the step of cutting the colored printed laminated board into required sizes.