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Method for embossing leather and fabrics.

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The method for embossing deep seals or devices on leather and fabric consists of wetting the material, subjecting the material to a die action at a high temperature and coating the rear side of the embossed seal or device with at least a layer of pure silicone or the like.

EP 0 255 187 A2

METHOD FOR EMBOSSING LEATHER AND FABRICS

The present invention relates to a method for embossing leather and fabrics, such as denim, in order to obtain seals and other devices, for example a stylist's name, on garments and accessories.

According to the known methods and industrial techniques, it has been up to date possible to emboss, on such a type of materials, devices of maximum 2 to 3mm of depth, the embossing resulting in short-lasting of the device or print, due to the conditions the material in continuously exposed to every day.

The object of the present invention is a method to obtain devices, seals or prints on leather and fabrics, such as denim, which may have a depth up to 40mm or more, and will be long lasting in spite of the hard conditions the leather and fabrics are continuously exposed to every day.

Said object is attained by the invention as characterized in the claims.

The method according to the invention is the following.

The material to be embossed, consisting of tanned leather or fabric, e.g. denim, is firstly wetted in a softening solution, of the type normally employed in the washing processes for fabric.

A suitable solution is a solution of water with at least traces of sodium chloride.

For denim, fabric in general and for leather this step may be conveniently a dipping for few seconds or the spraying of the solution over the material.

Only for hard leather of great tickness and for very deep embossing a dipping up to 18 hours is required.

The material is then pressed in a special press for fabrics, heated at a temperature which depends upon the required depth and upon the material.

For deep embossings of about 15 mm the following temperatures of the die are recommended:

denim : 190°C - 220°C

100% cotton : 200°C - 220°C

50% cotton and 50% flax : 200°C - 220°C

hard leather of thickness more than 2 mm : 230°C - 250°C

leather (skin) in general, of thickness more than 2 mm : 100°C - 160°C

artificial leather of thickness more than 2 mm : 100°C - 130°C.

Further it is recommended for the above cited materials a pressure of 10 - 70 Kg/cm² and a pressing action lasting 1 to 2 seconds.

The embossing die is made of cast iron, iron or any other suitable metal, and consists of two parts: a matrix (hollow element) and a punch (protruding element), which perfectly match. The material is interposed between said two elements, and embossed with the same pattern of the matrix.

After pressing, the cavity of the embossed seal or device, on the rear side of the material is coated with at least a layer of silicone or other equivalent material which is left in place. It is preferred the cavity be filled of said material. The preferred silicone is pure and transparent.

The equivalent material must be resistant to washing heat, flexible and resilient as the silicone.

The results of the method are embossed seals or devices everlasting and resistant to cracks and deformations.

The advantages of such a method are seals and devices not only deeper than the ones obtained up to date according to the known art, but long lasting, resistant and visible from greater distance than currently possible, offering furthermore better aesthetic results.

The invention may be more clear thanks to the following examples.

EXAMPLE 1

A fabric of denim of 14 ounces per sq.ft. has been simply wetted by spraying water having only traces of NaCl.

After been wetted, the fabric has been subjected to the action of a 20 mm deep die having a temperature of 210°C, with a pressure of 35 Kg/cm², for a time of 2 seconds.

Finally, the rear part of the embossing has been filled with pure silicone.

After several washing with hot water at a temperature of 100°C, the embossing has perfectly maintained its form.

EXAMPLE 2

A leather having a thickness of 1.5 mm has been soaked for 2 hours in a 15% solution of water and NaCl.

After the soaking, the leather has been subjected to the action of a 40 mm deep die, having a temperature of 200°C, with a pressure of 70 Kg/cm² for 2 seconds.

Finally the rear part of the embossing has been coated with a layer of pure silicone.

The embossing resulted water resistant, and indeformable in spite of having been repeatedly exposed to sun and rain.

Claims

1. Method for embossing leather and fabrics, such as denim, characterized in that it comprises the following steps:

- wetting the material with a softening solution;
- subjecting the material to the action of a die consisting of a matrix and a punch, heated at a high temperature;
- coating the cavity of the embossed seal or device with at least a layer of silicone, or other equivalent material.

2. Method according to claim 1, characterized in that said softening solution is water with at least traces of NaCl.

3. Method according to claim 1, characterized in that the die temperature is in the range from 100°C to 250°C.

4. Method according to claim 1, characterized in that the die pressure is of 10 Kg/cm² to 70 Kg/cm².

5. Method according to claim 1, characterized in that the die pressure is maintained for a time of 1 to 2 seconds.

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