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(54) **A method for manufacturing a carpet and a carpet thus manufactured**

Verfahren zur Herstellung eines Teppichs und ein nach diesem Verfahren hergestellter Teppich

Procédé pour la fabrication d'un tapis et un tapis obtenu par ledit procédé

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(56) References cited:
FR-A- 2 238 582 **NL-A- 6 615 182**

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Description

[0001] The invention relates to a method for manufacturing a carpet by starting from a fabric and tufting threads or yarns therein, and to apply a layer of latex to the semi-finished product thus obtained. The invention furthermore relates to a carpet consisting of a fabric comprising thread or yarn tufted therein and a layer of latex present on the obtained semi-finished product.

[0002] The method for manufacturing a carpet by tufting is described in European patent application No. 0 609 385.

[0003] FR-A-2 238 582 discloses a method for manufacturing a carpet by starting from a fabric and tufting threads or yarn therein, and to apply a layer of latex to the semi-finished product thus obtained, wherein the layer of latex is applied to the pile side. The free ends of the tufted threads or yarn are provided with a thin layer of a latex solution, as a result of which the latex will not contact the base layer of the fabric. The free ends thus provided with a thin film of latex are dipped into another fabric comprising a support layer provided with a base of a thick layer of latex. Both fabrics are passed through an oven in order to harden the layers and subsequently cut and separated into two carpet layers, i.e. a mother carpet comprising the fabric having tufted threads or yarns therein and a daughter carpet comprising a support layer provided with the latex layer and embedded yarns therein.

[0004] The tufted carpet according to the known prior art consists of a web or a ribbon-like fabric, into which web or fabric thread or yarn has been tufted. The tufting step leads to a semi-finished product, whereby the loose ends of the thread or the yarn form the contact surface and the underside of the semi-finished product obtained by tufting is covered with a layer of latex, thus fixing the incorporated pieces of thread or yarn.

[0005] The demand for a flat carpet is increasing, and such a flat carpet comprising various patterns can be obtained by means of a weaving technique. A few decades ago such a flat carpet was also obtained from a natural product, such as coconut fibres. Such desired patterns can be obtained by means of a weaving technique, but this is a highly labour-intensive and thus costly technique. A woven carpet having a particular surface area requires a production time of for example 8 hours, whilst a comparable tufted carpet can be produced within 10 minutes.

[0006] It has now appeared to be possible, by using a method according to the invention, to produce a carpet having the external form of a woven carpet within the time required for obtaining a tufted carpet.

[0007] Such a carpet can be obtained by using a method as disclosed in claim 1. As a result of this the contact surface of the tufted carpet becomes the surface to which previously the layer of latex was applied. The method according to the invention makes it possible to manufacture a tufted carpet which looks like a woven

carpet. Although a method for manufacturing a tufted and knotted carpet is known from WO-A-93 07790, it is not known to apply the layer of latex to the pile side. The tufted carpet thus known consists of yarns which have been tufted through a primary base layer, such as jute or polypropylene, and whereby the ends of the yarns are embedded in a layer of latex, which has been applied to the back side of the primary base layer.

[0008] As usual a layer of jute is applied to the layer of latex in order to reinforce the underside of the carpet thus obtained. It is also possible, however, to use another woven material to reinforce the underside, for example a plastic material, such as polypropylene, possibly mixed with natural fibre materials. The aggregate of layers will be smoothened on the latex side by carrying out a calender operation.

[0009] According to the invention it is to be preferred to use a ribbon fabric rather than a web, because the web, which may usually also be used for the tufting of carpet, is too stiff for obtaining a carpet according to the invention.

[0010] The tufting step is preferably carried out by means of a so-called sliding comb from a coarser machine whilst using a finer machine. In this manner a coarse-looking carpet is obtained, which is precisely what is desired. After the tufting step a pre-coating consisting of a solution of a synthetic latex, in particular on a base of carboxylated styrene butadiene rubber, is applied first. Such a solution may contain usual additives, such as fillers. The applied solution is heated, so that the solvent will evaporate and the synthetic layer will remain behind in the form of a layer. Then the layer of latex is applied. The layer of latex is then covered with a layer of jute, and the whole is subsequently calendered, so that the side to be laid on the floor will be smooth. The contact surface of the carpet will then correspond with the underside of the semi-finished product of a tufted carpet known so far, to which the layer of latex was so far applied. Thus a carpet which can be manufactured cheaply and which looks like a woven carpet can be obtained by using the method according to the invention to obtain, whereby the original pile, to which latex has been applied, can function as an incorporated underlay.

Claims

1. A method for manufacturing a carpet by starting from a fabric and tufting threads or yarns therein, and to apply a layer of latex to the semi-finished product thus obtained, **characterized in that** the method comprises four individual steps, i.e.

- i) applying a pre-coating to the pile side of the fabric having tufted threads or yarns therein in order to anchor the pile,
- ii) applying a layer of latex to the pre-coating of step i),

- iii) applying a reinforcing layer on the layer of latex of step ii), and
- iv) carrying out a calender operation.

2. A method according to claim 1, **characterized in that** said pre-coating consists of a synthetic latex in solution, which solvent is evaporated by heating. 5
3. A method according to claims 1-2, **characterized in that** a layer of jute is applied to the layer of latex as reinforcing layer. 10
4. A carpet consisting of a fabric with thread and yarn tufted therein and with a layer of latex present on the semi-finished product thus obtained, **characterized in that** said layer of latex is present on the pile side, wherein a pre-coating is present between said layer of latex and said pile layer of the semi-finished product and that said layer of latex is finished with a layer of jute. 15 20

Patentansprüche

1. Verfahren zum Herstellen eines Teppichs ausgehend von einem Gewebe mit Tuftfäden oder -garnen darin, wobei eine Latexschicht auf das so erhaltene halbfertige Produkt aufgebracht wird, **dadurch gekennzeichnet, dass** das Verfahren vier individuelle Schritte umfasst, d.h. 25 30
 - i) Auftragen einer Vorbeschichtung auf die Florseite des Gewebes mit Tuftfäden oder Tuftgarnen darin, um den Flor zu verankern,
 - ii) Auftragen einer Latexschicht auf die Vorbeschichtung aus Schritt i), 35
 - iii) Auftragen einer Verstärkungsschicht auf die Latexschicht von Schritt ii), und
 - iv) Ausführen eines Kalanderverfahrens. 40
2. Verfahren nach Anspruch 1, **dadurch gekennzeichnet, dass** die Vorbeschichtung aus einem synthetischen Latex in Lösung besteht, dessen Lösungsmittel durch Wärme verdampft wird. 45
3. Verfahren nach Anspruch 1 oder 2, **dadurch gekennzeichnet, dass** eine Juteschicht auf die Latexschicht als Verstärkungsschicht aufgebracht wird. 50
4. Teppich bestehend aus einem Gewebe mit darin getuftetem Faden und Garn mit einer auf dem so erhaltenen halbfertigen Produkt vorliegenden Latexschicht, **dadurch gekennzeichnet, dass** die Latexschicht auf der Florseite vorliegt, wobei eine Vorbeschichtung zwischen der Latexschicht und der Florschicht des halbfertigen Produkts vorliegt, und dass die Latexschicht mit einer Juteschicht voll- 55

endet ist.

Revendications

1. Procédé pour fabriquer un tapis en partant d'une étoffe et de fils ou filaments pour touffetage dans cette dernier, et en appliquant une couche de latex au produit semi-fini ainsi obtenu, **caractérisé en ce que** le procédé comprend quatre étapes individuelles, à savoir
 - i) l'application d'un revêtement préalable sur le côté poils de l'étoffe ayant des filaments ou des fils tuftés de manière à s'accrocher sur le côté poils,
 - ii) l'application d'une couche de latex au revêtement préalable de l'étape i),
 - iii) l'application d'une couche de renfort sur la couche de latex de l'étape ii), et
 - iv) l'exécution d'une opération de calandrage.
2. Procédé selon la revendication 1, **caractérisé en ce que** ledit revêtement préalable se compose d'un latex synthétique en solution, solvant duquel étant évaporé par chauffage.
3. Procédé selon les revendications 1 et 2, **caractérisé en ce qu'on** applique une couche de jute sur la couche de latex en tant que couche de renfort.
4. Tapis constitué d'une étoffe, comportant des filaments ou des fils tuftés en elle et comportant une couche de latex présente sur l'article semi-fini ainsi obtenu, **caractérisé en ce que** ladite couche de latex est présente sur le côté poils, et dans lequel un revêtement préalable est présent entre ladite couche de latex et ladite couche côté poils de l'article semi-fini et que ladite couche de latex est finie à l'aide d'une couche de jute.