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54 **Transfer drawings system from a paper bearing on natural and mixed fiber cloth.**

57 The system foresees the immersion of the material into a solution of water at 60° containing approx. 3% of oxalic acid, acting as a mordant, for a time required for prearranging the fibers. The said material is then taken out, put into a centrifuge for squeezing and at last sent to drying by means of fixed plants with hot air pass or with turning busket. The same material is then laid down, with superposed the paper bearing of the drawing to transfer, on a flatcar with thermal plate of a dieing machine with carries out the transfer, from their bearing, of dyes forming the drawing.

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TRANSFER DRAWINGS SISTEM FROM A PAPER BEARING ON NATURAL AND MIXED FIBER CLOTH.

The invention proceeding is referred to the use of a substance which, in the dyeing sector, is used for fixing the dye both on natural and mixed fibers combined with artificial ones of wear and cloths of wool, cotton, silk, hemp, jute, flax etc..., in the transfer molding process. At present, the above processings, while turning out consistent with molding on synthetic fibers, since they react to the heat transmitted to them by the deck thermal plate of the dieing machine, while expanding and allowing the penetration of the dyes which, in the subsequent cooling phase are embodied, do not allow a satisfactory sorption level of the dyes by the natural fiber, since these ones are not dilated by heat. Consequently, an insufficient transfer of the dyes occurs on wear and cloths made of synthetic fibers with a percentage up to 40%, which causes a faulty transfer of dyes with a slight trace and consequently without liveliness. With a view to obtaining satisfactory results when molding wear and cloths in natural and fixed fibers combined with synthetic ones, at present is necessary to operate with means which put the dyes, with direct feeding, on the support to print, such as screen printing, gravure printing or other. This requires heavy plant and operative costs. The use of the mordant substance, as described in the present invention proceeding, allows the solution of the problem by enabling the satisfactory use of the conventional proceedings from transferring drawings from a paper bearing to print on wear and cloths of different kinds in either natural and mixed fibers combined with other ones of synthetic type.

Substantially, the invention foresees to pre-arrange of wear and cloths in natural, mixed and artificial fibers for the fixing during the subsequent transfer molding phase, by immersion them into a solution of water ad 60° containing approx. 3% of oxalic acid acting as a mordant, during a time sufficient for pre-arranging the fibers.

An execution form of the working process foresees that the material extracted from the basin, for the predisposition of the dye fixing, is put into a centrifuge for squeezed and subsequently sent to drying, by using means of different types, such as of fixed type with hot air pass through or with rotating basket. The material is then laid down on the leaning flatcar of the thermal plate transfer machine, along with the paper bearing of the drawing to transfer, and printing is carried out under a press at approx. 200°.

Along with the oxalic acid in the basin for predisposing the dyes fixing, also softening agent and/or liquid soaps can be added, which allow the treatment of the raw material.

This allows to improve the tactile characteristics and sight perception, as well as softness for completing the final treatments.

The predisposing methodologies for the dyes fixing, as well as for carrying out transfer molding proceedings, are variable and in accordance with the specific requirements for the use. In particular, according to the invention, the mordant can be used with different percentages and in solution with other substances.

Claims

1) Transfer drawings sistem from a paper bearing on natural and mixed fiber cloth, characterized by the fact that on fixing the dyes, during the subsequent transfer molding phase, the predisposition of the cloths is foreseen by their immersion into a 60° water solution containing approx. 3% oxalic acid, which acts as a mordant, during a time suitable for pre-arranging the same bibers.

2) Transfer drawings sistem, as per claim 1), characterized by the fact that an executive form of the working proceeding foresees that the material, extracted from the basin for the predisposition the dyes fixing, is put into a centrifuge for squeezing and, subsequently, it is sent to drying by using means of different kinds, such as of fixed type with passage of hot air or with rotating basket. The material is then laid on the leaning flatcar of the thermic plate of a transfer machine along with the paper bearing of the drawing to transfer, and printing is then carried out under a press at temperature of approx. 220°.

3) Transfer drawings sistem, as per claim 1), characterized by the fact that along with the oxalic acid, even softening agent and/or liquid soaps can be added in the basin along with the oxalic acid, which allow to treat the raw material. This enables to improve the tactile characteristics, the visual perception, as well as softness, for completing the final treatments.



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EUROPEAN SEARCH REPORT

Application Number

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
A	FR-A-1060059 (RADUNER & CO AG) * page 1, lines 1 - 41 * * page 1, table ; page 5, example 12 * * claims 1, 3, 15 * ----	1	D06P5/22 D06P1/653 D06P5/00
A	CHEMICAL ABSTRACTS, vol. 96, no. 26, June 1982 Columbus, Ohio, USA LIEBERT, PETZOLT: "Increasing the fastness to light in transfer printing." page 82; ref. no. 219220 * abstract * ----	1, 2	
A	BE-A-669085 (UNITED STATES RUBBER CY) * page 6, lines 10 - 23 * * page 11, lines 26 - 31 * ----	1	
A	BE-A-665403 (UNITED STATES RUBBER CY) -----		
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			D06P
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 10 JULY 1990	Examiner DELZANT J-F.
CATEGORY OF CITED DOCUMENTS 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 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 I : document cited for other reasons & : member of the same patent family, corresponding document			