

Title (en)  
TRACKING DYEING METHOD FOR FIBRES, YARNS, FABRICS AND GARMENTS

Title (de)  
VERFAHREN ZUM NACHFÜHREN DER FÄRBUNG VON FASERN, GARNEN, GEWEBEN UND KLEIDUNGSSTÜCKEN

Title (fr)  
PROCÉDÉ DE SUIVI DE TEINTURE DE FIBRES, FILS, TISSUS ET VÊTEMENTS

Publication  
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Application  
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Abstract (en)  
[origin: WO2021220311A1] The present invention concerns a tracking dyeing method for the colouring or dyeing a natural fibre to be marked or identified, comprising the following steps: k) preparing a natural fibre in a dye tank; L) adding a siloxane agent in said tank; m) dispersing a liquid colouring solution comprising a pigment in said tank; n) heating said dye tank comprising said natural fibre, said siloxane agent and said colouring solution at a temperature of between 50 °C and 70 °C, preferably at 60 °C; o) keeping said temperature constant for a time comprised between 1 and 3 hours, optionally for a time of two hours; wherein said pigment is a piezochromic pigment, comprising: - an inorganic matrix having a lamellar conformation, - an organic filler configured to be intercalated or absorbed between the lamellae of said inorganic matrix, said pigment having a first configuration, at a first pressure value (P1), wherein said inorganic matrix lamellae are spaced apart and at least one organic filling layer is positioned between two of said layers, and a second configuration, at a second pressure value (P2), said second pressure (P2) being higher than said first pressure (P1), wherein said inorganic matrix lamellae are close together allowing a molecular aggregation of said organic filler, said molecular aggregation generating a change in pigment coloration such that, in a configuration of use of the pigment applied on the support surface, when a compression is applied on a portion of the treated support surface, the pigment changes from said first to said second configuration, resulting in a change in coloration of the portion of treated surface that has undergone compression with respect to the rest of the treated surface that has not undergone compression, allowing a marking or identification of the authenticity of the treated support surface, said molecular aggregation generating a change in pigment coloration such that, in a second configuration of use of the pigment once activated (piezochromic) and applied on the support surface, when UV irradiation is applied on a portion of the treated support surface, the pigment changes from a first coloration to a second coloration (photochromic), resulting in a change in colour and a fluorescent response of the portion of the treated surface which has undergone UV irradiation with respect to the remaining treated surface that has not undergone irradiation, allowing marking or identification of authenticity of the treated support surface.

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