

Title (en)

Process for dyeing of textile materials with indigo and installation for carrying out the method

Title (de)

Färbeverfahren für Textilmaterialien mit Indigo und Vorrichtung zum Ausführen des Färbeverfahrens

Title (fr)

Procédé de teinture d'une matière textile avec de l'indigo et installation pour la mise en oeuvre du procédé

Publication

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Application

EP 98630005 A 19980226

Priority

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Abstract (en)

[origin: EP0939161A1] Dyeing of textile fibers with indigo comprises impregnation of the fabric with indigo in reduced form, in eight successive baths with intermediate air exposure to oxidize the indigo, and fixing the resulting dye by forming a transparent resin film on the fibers. Process for dyeing textile materials with indigo comprises: (A) prewashing a textile fabric web (F) by passage through a prewashing unit (1) comprising two or more baths (2) containing a prewashing solution; (B) subsequently dyeing the fabric by passage through a dyeing installation (30) comprising a series of eight baths (35) each containing a solution of indigo in reduced form, and during passage of the web from one bath to the next, subjecting the web to oxidation by exposure to the air to convert the reduced indigo to indigo which then colors the fabric by impregnation of the fibers, the air oxidation being conducted such that if the level of oxidation occurring upon passage between the first bath and the second = x, then the level of oxidation which occurs upon successive passage through the remaining dye baths is as follows: (i) between the 1st. and 2nd. baths, level of oxidation = x; (ii) between the 2nd. and 3rd. baths, level of oxidation = 2x; (iii) between the 3rd. and 4th. baths, level of oxidation = 3x; (iv) between the 4th. and 5th. baths, level of oxidation = 4x; (v) between the 5th. and 6th. baths, level of oxidation = 5x; (vi) between the 6th. and 7th. baths, level of oxidation = 6x; (vii) between the 7th. and 8th. baths, level of oxidation = 7x; and (viii) after the 8th. bath, the level of oxidation = 8x; (C) washing and pre-drying the web by passage through a washing and pre-drying unit (40) comprising a series of baths (41, 42, 43, 44, 45) of which the first bath (41) contains water, the baths (42, 43 and 44) contain acetic acid and the bath (45) contains water such that the pH in bath (45) is 6-7, and after bath (45) the web is pre-dried by passage through rollers (50); (D) fixing the indigo dye onto the fabric web by passage through sizing unit comprising a bath (62) containing a mixture of resins to form a transparent film on the fibers in the web; (E) drying the web by passage over drying rolls (70) and (F) recovering the dyed fabric by winding onto a drum. Independent claims are included covering the installation for carrying out the dyeing procedure.

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