SUMMARY

The use of dye reagents for the dyeing of cotton 100% today is the most used by the characteristics of solidity acquired after the process of dyeing textiles since the dye react covalently with fiber. The process of dyeing with dyes reagents is developed in three phase:

1. Pretreatment (Descrude and Semiblanco)

2. Dye

3. Elimination of the dye hidrolysate

In this last phase the dyestuff hydrolysate always exists in greater or lesser proportion, saying dyestuff hydrolysate is located in two situations different.

-hydrolysed in water

-hydrolysed in the fiber

Problem

The use of colouring reagents in the dyeing of cotton needs necessarily the elimination in order to be able to reach the light required in textile dyestuff hydrolysate, and this you must perform numerous rinses which implies that a high consumption of water, time and energy. Because of their correct implementation depends on much of the strength which will take textile gender after the finishing process currently have developed a variety of products but not having a document that serves as guide for decision-making used recipes they are not the most appropriate, and several companies have remained with traditional methods which not being the most efficient handling additional problems as the low productivity since the time and resources invested in performing this phase could be occupied in a new game of fabric.

Objective General

Optimize the phase of soaping in 100% cotton with dyes dyeing reagents through of the evaluation and selection of a formula technically developed.

Objetive Specific

- Determine objectives (time, temperature, pH, liquor ratio) variables that are involved in the realization of the process in the phase of tincture as the post-production phase is carried out in order to eliminate the dyestuff hydrolysate and reach the fastness to washing required in textile

- Describing systems that compose the team of Overflow dye used in the process

- Assess the characteristics and properties of the products that will be used in soaping and agreement to their technical sheets perform the respective tests to determine product and process more efficient.

- Analyze costs of products used in order to determine their ideal quantities to thus reduce production costs - establish the ideal formula and the process to eliminate the dyestuff hydrolysate.

Justification

Today is relevant the importance of conserving natural resources and water being an essential element in the dye we must identify potential phases where this resource saving is significant and this leads us to determine that the process after the dye, soaping and rinsing phase where occurs the greater consumption of water since here it consumes up to 70% of the total water expended in the process of dyeing with dyes reagents.In order to optimize this phase is essential

to understand the principle of how it works the process that makes it possible to eliminate the dyestuff hydrolysate, and through the use of appropriate products developed to fulfil this function contribute to the optimization of the process, thus reducing the time required to complete this phase, the cost of energy and the more important to reduce water consumption.

Description of the study

El purpose of optimization of the phase of soaping in 100% cotton with dyes dyeing reagents is obtain recipes appropriate through the assessment and selection of products that are marketed for the realization of this function. They have been taken into account all the knowledge, studies and experience achieved during these years of practise in the textile company related to the activity. In the theoretical part focuses on describing generalities of cotton fiber, reactive dyes used in the dyeing of cotton, the varieties of products used in soaping, machinery used for this process and in the practical part analyzes specifically from the neutralized bath dyeing with dyes reagents, soaping and subsequent rinseswith the purpose of obtaining improvements in time, saving water and energy, and optimization of products and processes used, obtaining a cost analysis of different recipes and processes carried out at the end of this work.By the realized approach, proposes a method of washing according to the concentration of colorant of hue and dye bath, expected that this material is of interest for Technical Textiles, and textile engineering students, as optimize the phase of the process subsequent to the dye provides solutions that increase the productivity of a dry cleaning plantlower cost in the phase of elimination of dyestuff hydrolysate, time-saving, water consumption and therefore energy saving.

Hypothesis:

If we know the influence of the variables interfering the process subsequent to the tincture to eliminate the dyestuff hydrolysate can establish optimal washing programs according to the concentration of the dyes used in the recipe for dyeing and color tint which will allow the appropriate use of products used in soaping and reduction of production costs, water, time and consequently energy consumption decrease.