

The effect of some Structures of weft knitted jacquard on some Functional properties of Outwear Fabrics

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Abstract

Due to the importance of design in the knitted fabrics and using some structures to show the aesthetics of the design, that's why the research had tackled the use of jacquard as one of the executive methods of weft knitted fabrics and employing them in Outerwear Fabrics .

And these executive methods may affect some of the properties of the outer fabrics.

That's why this research aims to do an experimental study to show the effect of some executive methods for producing the Weft Knitted Jacquard Fabrics, that is represented in the back needle movement.

The importance of this research becomes clear through studying the effect of this on the quality of the final product and how far it can suit some natural and mechanical properties.

Some of the fabric samples have been produced with the following variables:

- The different executive methods (Stripping - Pique 1:1 - Pique 2:2 - The double closed - The double vicious 1:1 - The double stripping - The stripping vicious from back).
- A gauge (7) flat knitting machine has been used with an acrylic fiber material no. 28/2 English.

After carrying out the fabric samples and doing some lab tests on the produced fabrics

that are under search to specify their different properties and the relationship between

these properties and the variables of the study ,Then analysis of the results statistically

using the varying analysis and quality evaluation.

The study come to the following results:-

- 1- The weft knitted jacquard executive methods have an effect on the natural properties of the fabrics (The number of lines - the number of columns- the thickness - the weight of square meter).
- 2- The weft knitted jacquard executive methods have an effect on the

mechanic properties of the fabrics (Bursting resistance - The air permeability)

- 3- Sample number (5) (The double vicious 1:1) is the ideal sample for the most natural and mechanical properties and it ranked the first.
- 4- Sample number (6) (The double stripping) is the least for them all for the natural and mechanical properties and it ranked the seventh.

Key Words :

Jacquard - Weft - Gauge - Single jersey - Rib. Knitting –