Registration no : BSTech(TX)/3-16/M03019

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Final Examaniation

Ans:-Q#1

CREPE WEAVES

Crepe weaves constitute an useful variety of simple weaves and are also known as “crape” or “oatmeal”fabrics due to their pebbly or crinkled (rough) surface. The size of the pebbles and their arrangement on the fabric surface determine the type of crepe fabric.The crepe effect can be achieved either by the use of crepe yarns (highly twisted) or a crepe weave,and sometimes by special process of finishing, i.e., embossing. Crepe weaves are commonly used incombination with other elementary weaves, to produce a variety of various effects in elaborate jacquard designs for brocade and related fabrics.

The crepe weaves are characterized by the following features :

(a) They contain no twilled or other prominent effects

(b) The cloth is covered by minute spots or seeds

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(c) Highly irregular surface-puckered in appearance

(d) High twist yarns are used with controlled shrinkage

(e) Formed mainly by four methods, though several methods are available.

Crepe weaves are constructed in a variety of forms based on the end use requirements and the type of texture desired. They are accordingly produced in light, medium and heavy constructions. Generally the count of the warp yarns used is finer than the weft yarn. The weave employed is of an irregular nature.Though several methods are employed in the construction of crepe weaves, four methods are chiefly employed,

(i) Construction of crepe weaves upon sateen base

(ii) Combination of a floating weave with plain threads

(iii) By reversing a small motif

(iv) Insertion of one weave over another.

END USES OF CREPE WEAVE

Crepe weaves are frequently employed in conjunction with other elementary weaves, in order to produce a variety of different and contrasting effects in elaborate jacquard designs for brocade and similar fabrics. They are also employed in the production of cotton piece goods that are usually woven in the grey state, to be afterwards bleached and used for a variety of domestic purposes. Crepe fabrics are also sometimes printed with decorative designs and sold as a light and cheap material known as “cretonne”,

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which is employed extensively as loose coverings for furniture, antimacassars, covers, curtains and wall hangings, and for many other similar household articles.

Ans:-Q#2

PLAN FACED BED FORD CORDS:-

In this type, the cord or rib effect is produced by alternating plain weave with the cord either on alternatepicks or a pair of picks the construction of a plain face Bedford cord on a pair of picks, and a Bed Ford cord constructed on alternate picks the repeat size of the Bedford cord. The repeat is split into cutting ends and

face ends. The cutting ends weave plain and the face ends weave the cord. In Fig. A the insertion of the cutting ends are shown in the figure B, the insertion of the face ends are C, D, E and F shothe design, draft, peg plan and the cross section of the Bedford cord. At the interlacement of the various picks in the repeat with the face and the cutting ends are shown. In the example above the ratio of face ends to cutting ends the construction of a plain faced bed ford cord on alternate picks shows the face and cutting threads. the insertion of plain weave on alternate picks to obtain the Bedford cord design.Some wadded threads are introduced in between the face threads in order to increase the weight of the fabric or enhance the cord effect. The wadded threads so introduced will usually be coarser than the face threads and made of a cheaper material. A typical example At A, is shown the design of plain faced wadded bed ford cord. The wadded threads are introduced at the middle in between the face threads. For the purpose of differentiation, the face, cutting and wadded threads are indicated by separate notations

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respectively. At C is shown the warp way cross section of the design.

TWIL FACED BED FORD CARD

In this type of cord, a twill weave is used instead of a plain weave, along with the cord or rib weave to get a better effect. In this type, the warp is brought more prominently to the surface. the design of a twill faced bed ford cord.the twill faced Bedford cord. The twill weave is inserted on alternate picks. At the basic twill weave, which is a 1/3 twill. The repeat size of the cord theface and cutting ends.Wadding threads can also be introduced as in the case of plain faced Bedford cords.a wadded twill faced bed ford cord design. A 2/1 twill has been chosen(figure B) and inserted with the cord. The wadding threads are inserted in between the face threads and work with the cord threads. The wadded threads do not inter weave with the pick

END OF USES BED FORD CORDS

Bed ford cords find a wide range of applications such as dress materials, military dresses, suitings,woolen and worsted fabrics (heavy type)

Ans:-Q#3

ORDINARY WELT STRUCTURES:-

In these types of welt structures the indentations form continuous sunken lines which run horizontally in the cloth. The number of face picks in the width of a cord is varied according to requirements, but usually the number of consecutive picksthat are unstitched should not exceed twelve. the design of ordinary welt structures.

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In the above figure, is shown some ordinary welt structures. Figs. A, C and E show the first stage in the construction of ordinary welt structures and the corresponding final designs. The three different welt designs shown above are constructed on repeats of 6, 8 and 18 picks respectively. The ratio of the face to stitching warp is 2 : 1. The stitching ends are indicated by shaded squares. The ends are arranged in the order of one face, one stitching and one face, in each split of the reed. In the final designs B, D and F, the solid marks indicate the lifts of the tight stitching ends into the plain face texture on two consicutive picks.

WEFT WADDED WELTS:-

In the case of welt structures wadding threads can be introduced weft way. The object using the wadding threads is to enhance the prominence of the horizontal cords, and to make the cloth heavier. The wadding weft is coarser than the ground weft and is inserted as a pair of picks at a place. This is achieved with looms provided with multiple shuttle boxes at one side only. The face ends are lifted over wadding picks, while the stitching ends are left down. Sometimes, the same kind of weft is used for both the face and the wadding. In such cases looms with a single box at each side are employed, and in such cases, one wadding pick at a place may be inserted.Wadding picks are inserted only as extra picks and the take up motion is either rendered inoperative on wadding picks, or it is worked out in terms of the face picks only. the various designs of weft wadded welt structure.

FAST BACK WALTS:-

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In these types of structures the stitchings are interwoven in plain order with all, or some wadding picks. Whereas in ‘loose back’ type of structures (previous two types) the stitching ends are only lifted to form the indentations. In case of fast back welts, the reduction of the float length of the stitching ends on the back of the fabric helps to produce a more serviceable cloth less liable to accidental damage.the design of a fast back welt structure. the design of a fast wadded welt structure and , the weft welt crosssection. The numbered threads represent

the face and stitching warp.

END OF USES OF WELT:-

Welts find uses in shirtings, ties and vestings.

Ans:-Q#4

WARP BAKED FABRIC.

These fabrics are produced by alternately weaving two similar or different warp faced weaves. The objective of such a technique is to get greater thickness or mass of the fabric without using coarser yarns. For constructing warp backed fabrics two systems of warp and one system of weft is required.One series of warp threads constitute the face warp and the other constitutes the back warp. Obviouslyvtwo warp beams are required. The ratio of the face to back warp threads is generally 1:1. Sometimes aratio of 2:1 is also adopted.The first step in the construction of warp backed fabric is the selection of the face weave. The next step is to choose the back weave. The back

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weave is selected so as to leave long weft floats on the back

side in order to lower the back warp threads. Hence a warp faced weave is chosen for both the face andback threads.

A 3/1 twill is chosen as the base weave for both the face and back weaves. At A is shown the face weave and at C is shown the back weave. The design at C is a 3/1 twill as seen from back side and is 1/3 as viewed from the face side. For clarity the face and back warps are denoted by arabic and roman numerals respectively. The figure B shows the warp way cross section with the first pick as reference to the manner of interlacement. As can be seen from this cross section, the first pick of weft goes below the face warp threads 1, 2 and 3 and above 4 respectively. The weft also goes above the back

warp threads I, III and IV and below II respectively. It can be seen that the warp thread II is the binding point for the weft. This has been chosen since the binding point comes in the middle. The point of intersection of the weft thread 1, 2, 3 and 4 with the back warp threads I, II, III and IV respectively is denoted by the circled cross mark in diagram C.

The face and back warp threads are arranged alternately in the ratio of 1:1 as shown at D. At E is shown the warp way cross section of the warp backed fabric. It is to be noted that this is the same as the one shown at B. The weft way cross section is shown at F. At G is shown the complete weaving plan of the warp backed design. The draft used here is a divided draft, since two sets of warp threads are used in the design

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WEFT BACKED FABRICS .

In these types of fabrics two series of weft threads and one series of warp threads are used. A drop box is necessary for the purpose. The purpose of introducing back weft thread is to obtain additional weight or thickness of fabric. The face weft threads are placed in the upper layer of the fabric and the back weft threads are placed in the lower layer of the fabric.As in the case of warp backed weave, the first step is selection of the base weave. This may be either a warp or weft faced weave. A weft faced weave is suitable since it has longer warp floats on the back side. At A is twill which is weft faced. the weft way cross section of the weft backed

design . As in the case of warp backed fabric the most suitable stitching point is in the middle of the float.

The face and back weft are denoted by arabic and roman numerals respectively. The binding point of the first warp thread is by lowering below the weft thread III. C shows the back weft design with the suitable stitching points based on Fig. B. D shows the final design of the weft backed fabric by alternating the face and back weaves in the ratio of 1:1 weft way. F shows the weft way cross section which is the sameas the warp way cross section. G shows the weaving plan of the design. Since only one series of warp threads is used a straight draft is employed.

END OF USES:-

Backed fabrics find uses in shawls, heavier dress materials, overcoats etc

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