

The Traditional Damask Fabric: Weaving Concepts And Their Application

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I. INTRODUCTION

The traditional textiles there are many techniques being executed for the production of such fabrics. The raw materials cotton, silk, wool, linen or synthetic fibered materials involved in production of traditional textiles in India. All these woven fabrics are distinguished between their colour, pattern and texture, it includes surface embellishments. In this direction damask fabric, production carried out using weaving techniques. The word damasks-derived from the city Damascus in the European middle ages. Damasks fabrics were produced in woven on draw looms from fourteenth to sixteenth century. The Damascus city is the part of silk and allied products manufacture. This review paper focused on the production of damask fabric and their applications.

II.DAMASK FABRIC

The damask fabric produced with basic weaving techniques such as tabby, twill, damask, lampas and tapestry. Damask is a flatter and referred fabric as a firm, lustrous patterned reversible fabric interlaced with a warp faced satin weave or twill weave as ground. The figure 1 shows the damask fabric. The damask fabrics are similar to brocade fabric, but more flat [1][2][4].

A. Characteristics of damask

The characteristics of damask fabric are given as following.



Figure 1: Damask fabric

- **Figured/pattern fabric:** Damask is patterned fabric introduced through jacquard mechanism in weaving techniques.
- **Reversible fabric:** Damask is reversible fabric or similar pattern on both sides.
- **Lustrous fabric:** Float weave woven fabric is damask, so the fabric has a lustrous, shiny

quality.

- **Thick and heavy fabric:** Damask fabric thread density is closer resulting thicker fabric.
- **Durable fabric:** The tighter construction weave make the fabric strong and durable[5].

B. Classification of damask fabric

The damask fabric were categorized based on following aspects [1][2][3]

- **True damask or reversible damask:** This damask fabric is originally made of silk woven jacquard fabric of warp faced satin figuring and weft faced sateen as ground.
- **Twill damask or false damask:** This twill damask woven fabrics were produced with warp faced twill weave for figuring and weft faced twill as ground or vice versa.
- **Single color damask or monochromatic damask:** The single damask fabric produced with glossy warp faced satin weave pattern as figuring and duller in color as ground.
- **Double color damask:** The double colour damask fabrics were produced with contrasting colour warps and weft yarns in its interlacement.
- **Polychrome damask:** The polychromatic damask added gold and other metallic threads or additional colours as supplemental brocade weft.
- **Medieval damask:** The medieval damask fabric were usually woven with silk materials, but gradually weavers also produced with wool and linen damasks.
- **Modern damask:** The figured patterning and ground structure id woven in computerized jacquard loom.

III.MANUFACTURING OF DAMASK

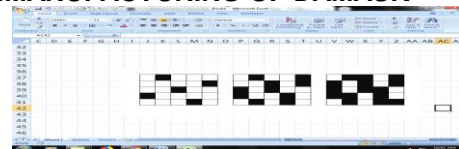


Figure 2: Float weave used for damask design

The figured damask fabric may be made of silk, wool, linen, cotton, rayon or synthetic fibres, or a

combination of these with various manufactured fibers with a jacquard pattern fabric formed by weaving. Damasks are woven with one warp yarn and one weft yarn. The single coloured damask weaves features of richly figured patterns of flowers, fruit, forms of animal life and other ornamental designs causes soft highlights on the fabric surface due to the use of long floats in weave. The figure 2 shows the example for the five end float weave used for damask design. Based on the position of the observer, the fabric reflects light differently according to the angle of the rays of light.

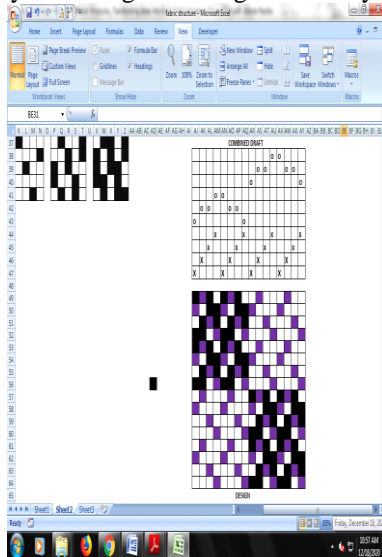


Figure 3: Twill damask - design with drafting plan

The weaves used for the production of damask varies, the simple or single damask fabric weaves used in the fabric not given any shading effect due to the available space is not sufficiently large in design. The floats used in the weaves are shorter float or longer float. The shorter float weave produces subdued effect and the finest results obtained from longer float weaves. The use of special weaves in the damask float extends to nine threads. The two single damask designs composed in small figured damask weave, this kind of single damask the float extends four threads of warp or weft. The space constrain in single damask production in the coarse pitch jacquard, addition of harness to ordinary mounting extends the design space in damask production. The researchers found many methods for the extend of design purposes special systems were followed such as pressure harness, banister harness and self – twilling jacquards. The figure 3 shows the design of twill damask and their draft plan.

The new method of twill damask production has discussed by the researcher in handloom, the use of special mounting increase the figuring capacity of the jacquard mechanism. One needle can control three ends and one card by special mounting in a design repeat and modern jacquard paper roll used which reduce the cost of production and weight to the mechanism [3].

IV.QUALITY OF DAMASK FABRIC

The wearing quality of the damask fabric assessed based on following factors.

- **The length of the fibers:** The damasks fabric are made with float weave-warp float or weft float (satin) construction, longer fiber in the yarn do not pull out of its structure where as shorter one come out and fuzz as quickly. Longer fiber is suitable for the construction of satin weave - damask fabric.
- **The evenness of yarns:** If the yarns are unevenly spun, then the cloth will be thick and thin in spots. Such a cloth presents a poor appearance and gives poorer service. The yarn selected for the damask fabric should even and free from imperfection in its length.
- **The closeness of the weave:** A closer and firm weave struture is necessary if a damask is to be durable. If loose weave is in construction make the damask fabric weaker because it allows yarns to slip and there by wear out the float. The best linen damasks are woven with about 50% more picks than ends per inch in its construction.
- **The length of the floats:** Floats in this construction may pass over four to twenty yarns. A float that passes over four yarns is considered short. Although they will wear well, short floats do not gives lustrous surface. The longer the float, the greater the light reflection and the more beautiful the cloth. For elaborate leaf and floral designs, a long float (at least eighteen or twenty yarns) is necessary. These allow a great amount of yarn to be exposed to friction on the surface. Consequently, long floats are not durable.

V. APPLICATION

The fashion and home textile industries used damask fabrics due to its versatility and high quality construction. The damask fabric imports luxurious or aesthetic appearance in home furnishings and in clothing. Most commonly, all types of damask fabrics are used for upholstery, tablecloths, draperies, curtains and napkins. Silk damask fabric used as curtain and upholstery decoration. The pure linen, cotton or mixtures of these fibers used for table damask. Damask tablecloth comes in standard sizes and the choice of size depends on the number of people to be seated at the table. For eight people table: 72 x 90 inches and for twelve people table: 82 x 108 inches. The standard size followed for banquet cloths are 60 X 116, 72 X 126 or 72 X 144 inches. Dinner napkins generally match the tablecloth and may be 18 X 18 or 22 X 22 inches square.

VI. CONCLUSION

The traditional damask fabric widely applied in many fields in domestic market such as clothing and decoration in furnishings. The woven fabric manufacturer's cluster developed kinds of modern damask with various

possible patterns which is used for the application. The excellent demand available for various damask fabrics in domestic and export market.

REFERENCES

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