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Research Paper :

A study of production of Jamawar Shawls in Amritsar

RAMANJIT KAUR BAJWA AND KAVITA MARRIYA

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See end of the article for authors' affiliations

Correspondence to:

RAMANJIT KAUR BAJWA
Department of Clothing and Textiles, Government Home Science College,
CHANDIGARH, INDIA

ABSTRACT

Shawls called Jamawars reflect the Indian heritage and were originally popular as Kani shawls which were the masterpieces of craftsmenship. The twill – tapestry technique used for weaving Jamawars in the past was painstaking and intricate one. The focus of this paper is to provide an insight into the revolutionary change in the manufacturing process involving Jacquards and powerlooms that made these Jamawars available to us in the present era at affordable prices and enabled them to sail smoothly through years and enter the list of machine made hot favourites especially in winters. The paper also studies the raw material used in manufacturing Jamawars and the problems faced by the Jamawar shawl industry of Amritsar.

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Shawl is one of the precious traditional woollen products, which holds universal fame till date. It results from the perfect blend of essentials like wool and different yarns, creativity, designing, embroidery, weaving and at the last finishing to give it a real touch of sensitivity. Jamawar like creations have the ability to make a person powerless by a fixed look besides guarding against chilling cold. The intricate patterns and the complexity of the colour scheme is enough to arouse the curiosity of any person. Jamewar is an Indian term for a gown-piece, a shawl cloth with small repeating patterns, often striped, without any borders(Monique,1987). Originally Jamawars were called Kani shawls due to the use of numerous little kanis or shuttles loaded with rich coloured threads. These shuttles were moved in a single weft line due to the constant change of colours which can be as many as 50 in a single shawl (Chattopadhyay,1995). Jamawar like products were created in an age which did not tolerate superfluity in crafts. These crafts had a living glow as they evolved, as a part of living community and not in isolation.

Every turn of the century, increased the preference and demand for Jamawar shawls. With the development of technology, a revolutionary change came in the manufacturing process of Jamawars. Present day, Jamawars take their birth in spinning and dyeing mills and further grow up in the hands of powerlooms and jacquards in the weaving mills and later on pass through various finishing processes to shape them into the form with gorgeous looks and deftness of touch(Mehta,1970).

The present jacquard woven Jamawars have much variety to suit every taste and creed but the traditional Jamawar shawls delighted only the fashion conscious females of the upper strata. An attempt has been made here to study the different raw materials, machines and looms used, steps involved in manufacturing of Jamawar shawls and various problems faced by the Jamawar shawl industry of Amritsar.

EXPERIMENTAL PROCEDURE

Methodology is the scientific way of conducting any research in order that a study may be reliable and conducted with accuracy. Before data collection, a preliminary study was undertaken and the units taken for study were sufficient for the pretesting of the sample. Survey method was adopted to carry out the research work. A number of techniques are employed under this method but for the present study a combination of Interview Schedule and Observation Method were used for data collection. List of all the Jamawar shawl manufacturing units of Amritsar were procured from the office of the Chairman of Shawl Club(India), located at Amritsar. Of the total 40 units, only 35 units were selected as sample by purposive sampling to include the units manufacturing Jamawar shawls exclusively. Sample size consisted of industrialists of different units selected and

the workers working in those units. One dyeing and finishing mill was also visited to acquire information about yarn dyeing technique and different finishes applied to Jamawars before packing and despatching. For data collection, interview schedule having simple, clear, and relevant questions were used along with observation method. The data from schedules were then coded, tabulated and analysed for clear interpretation of results.

OBSERVATIONS AND ANALYSIS

Amritsar is one of the big centres of woollen textile industry in India and is mostly famous for its Jamawar and embriodered shawls. The Jamawar shawl industry of Amritsar started in 1961 and all the units are small-scale single ownership units.

Raw material:

Wool, cotton and nylon yarns comprised the raw material required in the manufacturing of Jamawar shawls. Millspun yarn in undyed form was purchased weekly by maximum number of units from Amritsar and Ludhiana. But some units bought the raw material from Bombay and Ahmedabad also because of fine and cheap quality cotton and nylon available there. In all the units 2 ply wool was used for warp and single ply for weft. Single yarn of Z-twist was basically used. Australian, Newzealand and other softer quality wool blended with nylon was used for warp and wool alone for weft. In inferior quality shawls mercerized cotton was used in weft in patterned areas to reduce the shawl cost. Count of wool yarn used - $2/42^{S}$Nm to $1/80^{S}$Nm(1 denotes 1 ply yarn in $1/80^{S}$Nm; 2 denotes 2 ply yarn, 42 denotes number of fibres in cross-section) in $2/42^{S}$Nm. Count of cotton yarn used - $2/20^{S}$ to $2/40^{S}$ cotton. Price of raw material, thickness of wool fibre, fineness of quality of nylon, cotton and wool, count of yarn and lusture were the main factors considered by all the unit owners while purchasing the raw material.

Machines and looms:

All the units were using Jacquards and different power looms for shawl manufacturing which included Gwalior Loom (Overpick Loom as shown in Fig. 10) Icol machine and International Loom (Underpick Looms) and Pick by Pick Power Loom. Picking may be over pick or underpick type, which means that the picking stick which drives the picker in the shuttle box to propel the shuttle from one side of the loom to the other situated above the level of shawl being woven or mainly below it. Over pick is suitable for lighter looms while underpick is used on heavier looms.

Automatic imported Pirn winding machine(shown in Fig. 1), Indigenous Pirn winding machine(shown in Fig. 2), Warping machine, Jacquard attachment and card punching machines were also used in manufacturing Jamawars. All the units were using 2 special attachments

Fig. 1 : Automatic Pirn Winding Machine

Fig. 2 : Indigenous Pirn Winding Machine

with the machines – Shuttle box or Drop box in which shuttles filled with pirns were fitted for different weft colour insertion in shawls and Chain Patti (local name) for changing colours when some area had to be left like ground of shawl and after that area only the repetition of colour was required.

Steps involved in manufacturing Jamawars:

Yarn Dyeing and Yarn preparation prior to weaving:

After buying the undyed mill spun yarns,

manufacturers got the yarn dyed from local dyeing units in which yarn scouring is done prior to yarn dyeing(Shown in Fig. 3 and 4) and the main dyes used were metal complex dyes, acid dyes and brands like Irgalon dyes but for export quality shawls azofree dyes were used. During yarn preparation, warp yarn was twisted with nylon and another wool yarn to make it double ply yarn and single ply wool yarn was used for weft. For weft yarn, pirn winding was done on automatic or indigenous pirn winding machines. Then pirns were placed in shuttles for insertion of weft yarn.

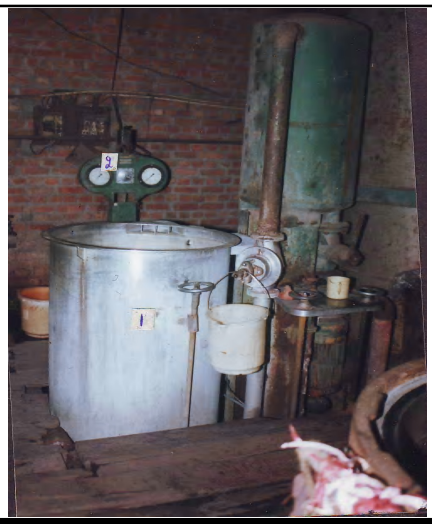

Fig. 3 : Machine used for yarn scouring

Fig. 4 : Undyed cones of yarn fitted on steel rods of carrier of Dyeing Machine

Warping and beaming off :

Warping was done on horizontal warping mill (shown in Fig. 5) which comprises the arrangement of large

Fig. 5 : Warping Machine, its Drum and Guide Roller

number of threads in a predetermined order, number and width, parallel to each other on a beam ready for loom. Prepared beam was placed at back of mill and rotated slowly so that threads wounded on evenly.

Fig. 6 : Creel Stand, Leese Reed and Wooden Frame for Yarn Package

Preparation of jacquard cards:

Card punching and Card lacing : After getting the designs prepared on graph paper from the designers the card punching was done with the help of card punching machine(shown in Fig. 7) which punches those areas on the card, which were the filled boxes on the graph paper and vacant spaces on the graph paper were not punched. Card lacing(shown in Fig. 8) was done after card punching in which the cards were tied together in required sequence for design formation with the help of strong cotton undyed strings.

Fig. 7 : Card Punching Machine with Graph Fitted on its wooden board

Fig. 9 : Needle board and hooks of Jacquard

Fig. 8 : Card Binding and punched cards of plastic sheets

Dressing of loom and weaving process :

Dressing of loom was further done which means putting warp on the loom. The jacquard card chain on the loom(shown in Fig. 9) was put by jacquard master.

Weaving process :

After the preparation of loom weaving was done. Long cords hold fine steel wires which were attached to another set of horizontal needles on the top of the jacquard loom. Each of the steel wire had an eye through which a warp yarn was threaded. When the jacquard was in operation, the needles which passed through the punched holes in the card pulled the steel wires thereby raising the warp yarn. The shuttle inserted the filling yarn. In this way, elaborate designs, flowers and figures could be made onto the ground of shawls. The manufactured shawls were then rolled on to the cloth beam followed by letting of the warp (shown in Fig. 10).

Fig. 10 : Weaving of Jamawar Shawl and its Rolling on Cloth Beam

Post weaving operations :

During clipping and mending operations, shawls were subjected to visual checking on glass or big wooden boards(shown in Fig. 11) and laboratory tests were performed for testing for quality, ends and picks, fastness to rubbing, water, sunlight, types of dyes used and other aspects to ensure good quality of shawls being manufactured. Washing of shawls was done with detergents like soda and lissapol(under category of anionic detergents). Sapco CP was the main softener used for

Fig. 11 : Visual checking of shawls on large wooden board after weaving

Fig. 13 : Stitching together of Thans of Shawls

Jamawar shawls.

Drying and finishing of shawls :

Besides removal of moisture in a hydroextractor, drying of shawls was done in open air(shown in Fig. 12). After drying, shawls were sent for finishing to local finishing units where thans of shawls were first stitched together(shown in Fig. 13) and then subjected to rotary finishing(shown in Fig. 14) followed by blowing finish for smooth and lustrous surface.

The sizes of the Jamawar shawls manufactured were mostly 40" x 80" for ladies and 50" x 100" or 1.5m x 3m, 45" x 90" and 52"x 104" for gents. According to the unit owners, woollen yarn quality, percentage of wool and cotton used, colours and designs used formed the basis of quality of the shawls manufactured.

Fig. 12 : Ddrying of Jamawar shawls in open air

Fig. 14 : Front view of Rotary Press Machine

Problems:

Maximum units were facing problems of price fluctuations and variations in quality of raw-material, union activities of labour, shortage of trained labour as trained workers preferred to work in big units which pay higher wages than small units, power cuts which led to decrease in production per loom, lack of govt. support with regard to lowering of VAT on yarns and lack of workers training cum designing centres, besides lack of specialized factory zone and necessary guidelines for export of shawls. Moreover, custom duty on imported machines was 5% in 2002 but now it is 15.25% and the cost of Euro has increased which resulted in adding to cost of machinery and it prohibits the new entrants to make investment in this sector. But inspite of all these problems, all the units

were planning to expand the market for the Jamawar shawls.

Conclusion:

The industry is weaving the masterpieces in the form of exquisite Jamawars which are within the purchasing power of every income group. For this industry to achieve further heights and capture the international market, govt. need to provide adequate subsidies like lowering of the custom duty from 15.25% to 5% on imported machinery to enable the unit owners to purchase the advanced technology which can be helpful in bringing down the cost of Jamawar shawls besides catering to the demands of domestic and international markets by maintaining the standard of their products . Further, Govt. should also provide power at subsidized rates in the border districts of Punjab and open training centres to give training to workers regarding the operation of the sophisticated machinery used in Jamawar shawl manufacturing, knowledge about the minor repairs of the machinery and also provide necessary guidelines for export of shawls as the manufacturers were willing to diversify the markets for Jamawars due to their universal increase in demand as their intrinsic beauty is perennial.

Authors' affiliations:
KAVITA MARRIYA, Department of Clothing and Textiles, Government Home Science College, CHANDIGARH, INDIA

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