

Review Article

Development of Fashionable Garments Using Various Washing Techniques

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Abstract

We are living in the fashionable era everyone wants to wear fashionable garments. As a result the people can make the difference with others. At present, the garment wash is a new technology in the garment trade. Normally washing means cleaning something, but in the garment trade, only of garments is not the garment wash. Garment washing is a technology which is applied to change or modify the outlook, appearance, comfort ability and design of garments. Garments washing are the best touch of a garment. Depending on garments construction different types of washing process can be done.

Key words: Fashion, Garment washing, Washing Techniques, Finishes.

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INTRODUCTION OF GARMENT WASHING

The technology which is used to modify the appearance, outlook comfort ability & fashion of the garments is called garment washing.

1.1. Objects of Garment Washing

Garment washing is the best touch of a garment. Same type of garments can produce several effects for several wash.

- To create wash look appearance, seems the new touch of fashion.
- By the washing technique, faded/old, color or tinted affect.
- Washing technique creates new fashion such as tagging, grinding, destroy, blasting, whickering, permanent wrinkle, deep dye, tie dye, p.p spray, hand crapping, p.p spoonzing etc.
- To reduce size materials that imports soft hand feels.

- To attraction the customers/buyer by different types of fashionable washing and market development.
- Due to washing, shrinkage occurs in the garments. There is no possibility of further shrinkage of the wash garments.
- Any dirt, spot or germ if added in the garments during manufacturing is also removed due to washing.

2. WASHES

Garment washing has evolved from the bare requirement of shrinkage to significant value addition to the garments. The invention of apparel as a fashion statement has added fuel to the creativity of the washer to try out new finishes. Washes can be broadly categorized into three types:

1. Aesthetic Finishes
2. Functional Finishes
3. Correctional Finishes

2.1. Aesthetic Finishes

2.1.1. Acid wash



This term is a complete misnomer as virtually no acid is used in this process. Denims are washed with pumice stones soaked with hypo to give significant contrast in the color of the Denim Material. The same process can be employed on yarn dyed garments giving several finishes. In this process pumice stones are substituted with thermocol balls.

2.1.2. BALL WASH



Garments are washed with different kind of Balls like Emery, Rubber, Plastic and Silicone coated Balls to give myriad finishes.

2.1.3. Enzyme wash



It is an ecological way of treating the Garment to get a washed, bright, clean and premium look.

2.1.4. Silicon softener



Wash durable soft silky hand feels achieved with selected Silicone emulsions and softeners

2.1.5. Vintage wash



Vintage looks created on the Garment with different auxiliaries depending on the fabric. We also have G2 Process by which we can get different vintage levels without using any chemical and water. Please refer to the technology section of the website for further details.

2.1.6. Stone wash



This is a traditional method of washing Denims and other heavy fabrics like Canvas. It gives a newly manufactured garment a worn out appearance.

This process increases the softness and flexibility of stiff and rigid fabrics. Abraded, worn and battered look on heavier fabrics like drills and twills done using Pumice stones.

2.1.7. Perlite wash



Delicate light weight garments which require the stone wash effect are washed with perlite powder in place of Pumice stones to avoid damage. The advantage is that we get the stone washed effect throughout the fabric and not just on the upper surface as in case of stones.

2.1.8. Peach wash



Peaching or sueding is a mechanical finish done on fabrics, but the same effect can be replicated in the garment form by chemical treatments.

2.2. Functional Finishes

Garment manufacturers are challenged to find innovations and to seek new materials that provide tangible benefits. Properties such as Easy care, antimicrobial, Antistatic, Stain resistant, water and oil repellency, flame retardant, UV protection, thermal and moisture control can be

incorporated into the garment to make them functional.

2.2.1. Antimicrobial



Anti-microbial finish causes a fabric to inhibit the growth of Microbes. The humid and warm environment found in textile fibers encourages the growth of the microbes. In the present day world most of us are very conscious about our hygiene and cleanliness. Clothing and textile materials are not only the carriers of microorganisms such as pathogenic bacteria, odour generating bacteria and mould fungi, but also good media for the growth of the microorganisms.

Anti Microbial finished Garments remain pure, clean and fresh as the finish combats the growth of the odor causing Bacteria. Microbial infestation poses danger to both living and non-living matters. Obvious smell from the inner garments such as socks, spread of diseases, staining and degradation of textiles are some of the detrimental effects of bad microbes. Though the use of antimicrobials have been known for the decades, it is only in the recent couple of years several attempts have been made on finishing textiles with antimicrobial compounds.

The consumers are now increasingly aware of the hygienic life style and there is a necessity and expectation for a wide range of textile products finished with antimicrobial properties.

2.2.2. Ultra violet protection



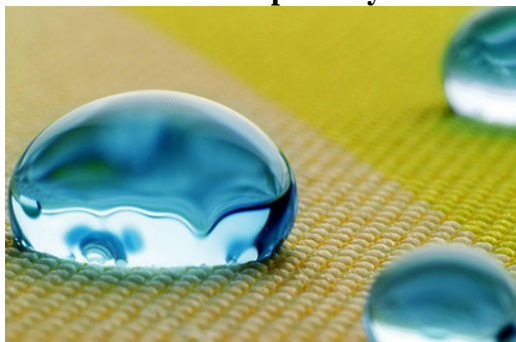
Sunlight includes rays of invisible UV radiation and over exposure to UV radiation can lead to Sunburn, accelerated skin ageing, Skin cancer. Garments treated with this finish protects us from the harmful radiations. UV protection is especially required for fair skinned sun sensitive people, Children, People who spend more time in the sun.

2.2.3. Soil release



Stain release agents give the fabric a property by which stains can be easily washed out during laundering. This is achieved by a combination of Fluorine and Hydrophilic groups in the Soil release Agent. The fluorine group repels oil while the Hydrophilic group facilitates stain removal in the washing.

2.2.4. Water & Oil repellency



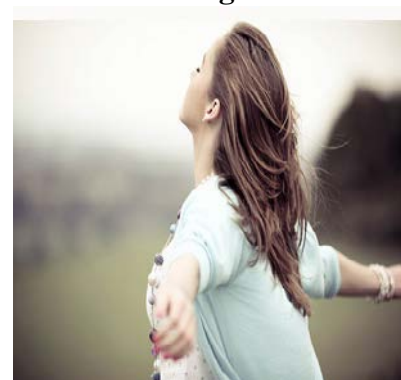
Water and Oil repellency happens when the surface tension of the solid surface is lower than that of oil & water. As such water and oil will enter the fabric surface as surface tension of cotton is higher than that of Oil & water. When the fabric is treated with this finish the surface tension is lowered than that of the Liquids. Hence your garment becomes Water and Oil Repellent.

2.2.5. Flame retardancy



Flame retardants improve the resistance to ignition of the Substrate thereby reducing the chance of starting a fire. In case of a fire they reduce the flame spread and rate of fire development, thus providing extra time to extinguish the fire or make an escape. Flame retardants act physically as well as chemically in combating the fire by cooling the substrate, forming a protective layer over it, diluting the combustible material and also by chemical reactions.

2.2.6. Moisture management



By this finish the Garments especially that are worn next to the skin, transport the sweat from the body and evaporate it to the atmosphere in double quick time. So you feel the garments more dry, they don't

cling on to your body. Also you feel lot more cool. This finish makes the fabric more breathable.

2.3. Correctional Finishes

2.3.1. Color fixing

Fastness parameters like fastness to washing, crocking, light can be improved.



2.3.2. Anti seam slippage



In some garments seams slip at the slightest force applied. This can be corrected by using a special auxiliary. In addition to preventing seam slippage, the strength is also increased by this treatment.

2.3.3. Antiozonate finish



The yellowing of indigo dyed garments especially denims is due to the exposure to Ozone from the atmosphere. This Ozone

oxidizes the indigo to products that are dull and yellow in color. Hence your favorite Jean has yellow stains on exposed portion which you detest. To offset this Denims are treated with Special Anti Ozonate Softners in the final finishing bath. These softners b4nd Ozone and arrest the oxidation of Indigo.

Hence along with the customary softness your denim also gets Ozone Protection. The yellowing of indigo is due to the oxidation by exposure to Ozone from the atmosphere. To offset this special anti ozonatesoftners are added to the final bath.

2.3.4. Color enhancing



Dark Colors like blacks, Navies can be made deeper and brighter by this process.

2.3.5. Optical brightener wash



Optical brighteners are designed to mask the yellow or brown tones in the fibers and make the fabric look cleaner and brighter in white garments.

2.3.6. Anti pilling wash



This treatment reduces the forming of pills on fabrics and knitted products made from yarns with a synthetic fibre content, which are inclined to pilling by their considerable strength, flexibility, resistance to impact. This finish is based on the use of chemical treatments which aim to suppress the ability of fibres to slacken and also reduce the mechanical resistance of the synthetic fibre.

3. WASHING TECHNOLOGY

3.1. G2 – waterless washing machine



The concept of Sustainable Garment Washing an eco friendly approach to washing is being enhanced by the G2 Waterless Washing Machine. The Air from the atmosphere is introduced into the G2 generator. This air is converted into Ozone gas that is moved inside the tumbler. The O₃ washes the garment breaking the anchor of the fibre dyeing. The O₃ is transformed back to air and released into the atmosphere.

1. Vintage look on Non denims.
2. Shade band on Non Denims from a single shade.
3. Back staining is completely removed in Denims.

4. Crocking fastness is improved in dark colors.
5. Reduces the water consumption.
6. Yellowing of Denims greatly reduced.
7. Denims with Appliques can be washed.
8. Black and Grey denim fade down without turning brown.
9. Bleaching without Bleach.

This technology allows significant water and energy usage reduction. It also eliminates the need of toxic processes such as bleaching and permanganate usage. By using the air from the atmosphere, G2 reproduces Ozone gas conditions to give garments the real look of outdoor usage. Reproducibility Reproduces same physical and chemical conditions wash after wash, thus standardizing all outcomes.

3.2. Nano bubbles



E Soft is a breakthrough Nano technology in Garment softening . Super soft touch feels can be achieved. The e-Flow technology, gets air from the atmosphere and transforms it into nanobubbles. Products and water then naturally distribute themselves forming the nanobubble skin, a perfectly homogeneous mix between water, products and air. The skin of the nano-bubbles is responsible of transporting the properties of the product to the garment are an optimal & efficient way. Functional elements are then carried on the nanobubble surface in an optimal & efficient way.

1. Unmatched superb touch feels can be achieved
2. Delicate Garments which could get damaged in the normal wash cycles,

can be effectively softened via E Soft Technology.

3. The brightness and lustre will be enhanced.
4. Color loss will be zero

CONCLUSION

Garments washing process is very broad in textile industry. Under this investigation it is clear that after washing garments are gathered some properties like appearance, softness, comfort and strength because unwashed garments are almost stiff and rough. Now a day, every garments industry tries their level best to produce quality product but that industries are survive and prosper who can produce best quality products at a competitive price. It is further noted that trends are changed very quickly as per customer demand so to meet the desire of them washing process are able to open new market.

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