



Daffodil
International
University

Faculty of Engineering

Department of Textile Engineering

REPORT ON

“Study on Different Types of Denim & Knit Garments Faults
and Their Remedies”

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The Report presented in Partial Fulfillment of the requirements for the degree
of Bachelor **of Science in Textile Engineering**

Advance in Apparel Manufacturing Technology



DECLARATION

We hereby declare that the work presented in this thesis, "Study on Different Types of Denim & Knit Garments Faults and Their Remedies," is our original work and has not been submitted for credit toward a degree from another university. We have also properly acknowledged the use of all resources and materials used in the thesis.

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Approval Sheet

This research entitled “Study on Different Types of Denim & Knit Garments Faults and Their Remedies” “at Daffodil International University, February 2024” prepared and submitted by **Nisat Sarker (ID: 201-23-793), Md. Junayed (ID: 201-23-802) & Sumyia Islam (ID: 201-23-961)** in partial fulfillment of the requirement for the degree of BACHELOR OF SCIENCE IN TEXTILE ENGINEERING has been examined and hereby recommended for approval and acceptance.

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“ACKNOWLEDGEMENT”

Firstly, we would want to thank Allah Ta'ala for giving us the opportunity to complete this report. We would also want to use this opportunity to express our gratitude to our wonderful supervisor, Mr. Md. Abdullah Al Mamun, Associate Professor, Department of Textile, Daffodil International University, for providing us with the guidance and inspiration we required to complete this project. His thorough leadership, encouragement, and hard work have made it possible for the job to be completed accurately.



Dedication

This report is dedicated to our parents, who have always supported us and allowed us to pursue our studies in textile engineering.



Abstract

In apparel manufacturing, ensuring the quality of denim and knit garments is paramount for brand reputation and customer satisfaction. However, despite stringent quality control measures, faults can still occur during production, leading to subpar products that fail to meet consumer expectations. This research is about understanding the common types of faults and how could we can minimize the faults in denim and knit garments, along with their remedies, is crucial for maintaining high-quality standards in the industry. By implementing rigorous quality control measures, utilizing superior materials, and investing in skilled workforce training, manufacturers can minimize the occurrence of faults and deliver garments that meet or exceed consumer expectations. Ultimately, prioritizing quality assurance not only safeguards brand reputation but also fosters long-term customer satisfaction and loyalty.



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Chapter -1: Introduction

1.1 Background of The Project

Since the garment industry caters to the diverse needs and fashion tastes of individuals worldwide, it is an essential part of global trade. Because of their classic look, comfort, and longevity, knit and denim items are in high demand in this industry. Producers still find it difficult to uphold the high standards for these clothes in spite of their great appeal.

The motivation for this research came from the discovery of persistent defects and issues in knit and denim apparel during the production processes. The lifespan and structural integrity of the garment are impacted by these faults, which can range from uneven dying to sloppy sewing and uneven size, in addition to their aesthetic worth.

Furthermore, because customers are becoming more discerning and demanding when it comes to the quality of their products, manufacturers need to address these issues if they hope to preserve their brand reputation, meet customer expectations, and remain competitive in the market.

The lack of comprehensive studies that focus on the various defect kinds specific to knit and denim garments, coupled with workable correction procedures, emphasizes the need for research in this area. To bridge this knowledge gap and provide industry stakeholders with relevant information, this project will conduct a thorough assessment that includes in depth analyses of fault occurrences, root causes, and recommended solutions.

More than just academic interest, this topic matters because it directly affects the profitability of knit and denim apparel companies as well as their operational effectiveness and product quality. By proactively identifying and resolving common defects, manufacturers can improve customer satisfaction, reduce costs associated with rework or returns, optimize manufacturing processes, and eliminate waste.

The overarching objectives of this project are to increase industry participants' understanding of the apparel sector, facilitate ongoing advancements in manufacturing techniques, and offer practical answers to challenges encountered in the production of knit and denim clothes. Through teamwork and a commitment to quality excellence, this project

seeks to support the denim and knit garment sectors' continued growth and competitiveness in the global marketplace.

1.2 Objective of this Project

- Recognizing typical errors.
- Knowing the underlying causes.
- Making corrective recommendations.
- Testing and validation.
- Recordkeeping and communication.
- Encouraging the transfer of information

1.3 Importance of the Project

Improving Product Quality: The project's emphasis on finding and fixing common flaws in knit and denim clothing directly helps the apparel industry's product quality. Manufacturers can meet or surpass consumer expectations by enhancing the overall comfort, durability, and attractiveness of their clothing by putting in place efficient corrective methods.

Errors are lessened early in the production process, reducing rework, scrap, and returns and saving manufacturers money. Reducing the frequency of errors and optimizing production processes can help businesses become more profitable and efficient.

Sustaining Brand Reputation: When a company consistently produces high-quality apparel, its reputation for excellence and reliability is enhanced. By reducing errors and ensuring consistent product quality, manufacturers may build consumer trust and loyalty. This will ultimately raise brand value and competitiveness in the market.

Getting together Regulatory requirements: Manufacturers must abide by industry rules and quality standards in order to conduct business in a morally and legally acceptable manner. Through the execution of suitable corrective steps to address issues, businesses can ensure



compliance with relevant legislation and regulations, thereby reducing legal and reputational risks.

Promoting Sustainable Practices: Cutting down on errors during the clothing production process helps reduce waste and its negative effects on the environment. Manufacturers who streamline processes and materials to prevent mistakes like fabric runs or uneven dyeing can promote sustainable practices and support environmental stewardship goals.

Encouraging Innovation and Continuous Improvement: The project encourages innovation and information sharing within the apparel industry by proposing innovative corrective actions and supporting industry stakeholders in cooperating. Through the sharing of ideas and best practices, manufacturers may work together to advance industry standards and continuously improve the processes involved in the production of clothing.

Empowering Industry Stakeholders: By providing workable answers to typical problems in the production of knit and denim clothing, the project empowers industry stakeholders such as suppliers, manufacturers, and researchers. Through findings dissemination and knowledge transfer, the project provides stakeholders with the means and resources necessary to improve their marketability and competitiveness.

1.4 The Project's Objective

The purpose of this project is to identify the various flaws in knit and denim clothing and to create solutions for those issues that contribute to the production of high-quality goods..

1.5 Project Scope

To examine different kinds of errors:

- Root Cause Evaluation
- Corrective Action Plans:
- Protocols for Quality Control
- Ongoing Enhancement
- To strive for a rise in output.
- To determine the number of errors per shift and address them.
- How to shorten a specific operation's duration while boosting output.

- How to cut down on errors.
- To determine what causes the creation of alters.
- Sustainability-related factors
 - Sustainability considerations

1.6 This project's limitations include:

- Lack of appropriate training;
- Operator skill;
- Counseling between operators and floor staff;
- Absence of a distinct training department; and
- Employee mentoring



Chapter -2: Literature Review

2.1 Previously Study

Faults in apparel: Regarding the production of clothing, a flaw is any variation in the intended or anticipated level of quality of a garment. It can appear in a variety of ways, including as flaws, defects, or blemishes, and it can happen at any point during the production process, from choosing the right materials to finishing. Errors may impact the garment's look, feel, and general quality, which could result in unhappy customers, higher expenses, and even harm to the brand's reputation.

Common types of faults in apparel include:

- Faults relating to the material: Distinctions in the cloth, including slubs, knots, streaks, or broken threads; variations in color; and shrinkage of the fabric.
- Errors connected to construction: uneven hemming, misaligned components (such as seams, pockets), puckered seams, and irregular stitching (such as skipped stitches, loose threads).
- Errors relating to the surface, such as snagging, fading, pilling, or surface deformities.
- Design-related errors: Mistakes in pattern alignment, incompatibility of design with fabric characteristics, or defects in printing or embroidery.
- Finishing-related flaws: uneven seams or edges, excessive chemical residue on the surface of the garment, or inadequate washing or finishing procedures.

2.2 Identification of Denim Garments Fault

Even while denim clothing is known for its longevity and classic style, it can have a number of flaws that reduce its quality and visual appeal. To successfully remedy concerns, manufacturers, designers, and consumers must identify and classify these defects. Based on their traits and expressions, common types of denim garment flaws are categorized in the following way:

Surface Defects:

- Fading and deterioration: Improper dyeing procedures, washing, or exposure to sunshine can all lead to an uneven loss of color intensity or deterioration on denim fabrics.
- Staining: Surface discoloration or visible patches on denim fabric brought on by spills, stains, or chemical reactions.

- Pilling: Abrasion or friction during washing or wearing denim causes tiny balls or clusters of fibers to form on the surface of the fabric.
- Unequal Dyeing: Spots, streaks, or areas of unequal saturation that indicate an inconsistent color distribution across the denim fabric

Structural Defects:

- Seam puckering: Wrinkles or gathering along seams may result from variations in thread tension while sewing or from using the wrong thread tension settings.
- Fraying and fibrillation are the terms used to describe the deterioration of the yarns along the edges of the fabric as a result of low yarn twist, abrasion, or insufficient fabric finishing.
- Ruptures and Tears: The frailty of the denim material causes the denim to rip or tear, frequently in areas of severe stress.

Construction Defects:

- Misalignment of Components: Inaccuracies in pattern or assembly can lead to misalignment or misplacement of design features like buttons, pockets, or seams.
- Stitching irregularities: missed stitches, loose threads, or uneven stitch lengths are examples of uneven or inconsistent stitching along seams, hems, or edges.
- Bad Hardware or Accessories: Poor quality or defective rivets, buttons, or zippers can cause practical problems or cosmetic defects in denim clothing.

Finishing Defects:

- Uneven Distressing: Unnatural or disagreeable aesthetic features result when denim clothing is distressed or faded excessively or unevenly.
- Inadequate Hemming: Hemmlines that are uneven, frayed, or unraveled might result from inadequate or uneven hemming of clothing edges.
- Poor Washing or Finishing: Denim with poor washing or finishing processes has an uncomfortable, rough, or stiff texture.

2.3 Identification of Knit Garments Faults

Despite being widely prized for their comfort, suppleness, and versatility, knit garments can develop a variety of flaws that impair their appearance, durability, and usefulness. To maintain the quality of the clothing and address issues quickly, it is critical that designers,

manufacturers, and consumers are aware of these defects. Typical knit garment faults are listed below, along with identification methods for each:

- **Snagging and Runs:** Snags are abnormalities in the fabric that appear as tiny protrusions or snags on the surface of the garment due to yarn loops being pulled or caught. Runs are unseen holes or streaks in fabric that are made of continuous lines of broken threads.

Identification: Examine the surface of the garment visually for any anomalies, such as apparent runs, pulled yarns, or protruding loops.

- **Pilling:** When loose threads on the surface of a garment tangle and create tiny, fuzzy balls or clusters, it is known as pilling.

Identification: Examine the fabric surface, paying particular attention to regions that are prone to friction, like the seat areas or underarms, for the presence of pill clusters or fuzziness.

- **Seam Slippage:** The term "seam slippage" describes the obvious gaps or openings in a garment caused by the separation of seams along the stitch lines.

Identification: Check seams, especially in high-stress places like waistbands or shoulders, for evidence of separation or pulling away from the fabric.

- **Hole Formation:** Knitted clothing may develop holes as a result of friction, weakening of the fabric, or manufacturing flaws, which leave gaps or tears in the fabric that are apparent.

Identification: Visual examination for tears or holes in the fabric, paying particular attention to places like the elbows and knees that are subject to friction or stress.

- **Distortion of Knit Structure:** The garment becomes uneven or malformed in places where the knit structure loses its natural flexibility or shape due to distortion.

Identification: Checking the item of clothing, particularly after washing or wearing, for any regions of uneven stretching, puckering, or distortion.

- **Tension Irregularities:** Variations in the fabric's tightness or looseness throughout the garment are indicative of tension irregularities and result in noticeable differences in texture or appearance.

Identification: Examining the surface of the fabric, especially around seams and borders, for any regions with unequal tension, puckering, or waviness.

- **Poor Finishing:** When garment edges are not properly stitched, trimmed, or hemmed, it can cause fraying, unraveling, or rough textures. This is known as poor finishing.

Identification: Carefully inspect seams, hems, and edges for any loose threads, crooked stitching, or unfinished edges that can reduce the longevity or attractiveness of the garment.

2.4 Problems Arise for Faults in Denim Garments

Denim garment flaws can result in a number of issues that impact the garment's quality as well as customers' general satisfaction. The following are some typical issues brought on by flaws in denim clothing:

Aesthetical Problems: Flaws like fading, discolouration, staining, or pilling can make denim clothing appear shabby or poorly constructed. Customers may become less satisfied as a result and be reluctant to buy or wear the item.

Durability Concerns: Sewing puckering, fraying, and ruptures are examples of structural flaws that compromise the strength and endurance of denim clothing. Customers may view the item as being of low quality or untrustworthy as a result of early wear and tear brought on by this.

Issues with Comfort and Fit: Misaligned parts or crooked stitching are examples of construction flaws that can impair the fit and comfort of denim clothing. Rough edges or uneven seams can irritate or cause discomfort when worn, which can leave customers unhappy and result in bad reviews.

Brand Reputation Damage: Consumer perception of a brand can be negatively impacted by persistent problems with defects in denim clothing. Bad feedback, exchanges, and grievances regarding defective denim items can weaken consumer confidence and loyalty, which can affect the brand's reputation and ability to compete in the market.

Increased Costs: Reworking, fixing, or replacing faulty products are some of the extra expenses manufacturers face when dealing with flaws in denim clothing. Production costs

are increased by the time and resources needed for quality control procedures like testing and inspections.

Environmental Impact: The disposal or return of defective denim clothing adds to trash production and degradation of the environment. The environmental effects of defective product disposal and the energy and materials used in their manufacture exacerbate the ecological footprint of the sector.

Legal and Compliance Risks: If denim garment defects are not corrected, there could be legal repercussions or a breach of consumer protection laws. If a manufacturer sells faulty goods that are unsafe to use or don't live up to requirements, they risk fines, recalls, or litigation.

2.5 Problems Arise for Faults in Knit Garments

Faults in knit garments can lead to various problems affecting the garment's quality, wearer satisfaction, and the reputation of the brand. Here are some common problems that arise from faults in knit garments:

Seam Slippage: This can cause discomfort and compromise the overall fit of the garment.

Tension Irregularities: Uneven fabric tightness may lead to discomfort and affect how the garment conforms to the wearer's body.

Snagging and Runs: These faults can compromise the fabric's integrity, leading to premature wear and tear.

Hole Formation: Holes or tears in the knit fabric reduce the garment's lifespan and overall durability.

Pilling: Formation of pills on the surface affects the appearance of the garment, making it look worn and aged.

Color Inconsistencies: Uneven color distribution can create a patchy or irregular look, affecting the garment's visual appeal.



Misalignment of Stitches: Uneven stitches or misaligned patterns can affect the garment's overall appearance and quality.

Design Incompatibility: If the design is not well-matched with the knit fabric, it may lead to distortion, affecting both aesthetics and fit.

Return Rates: Higher rates of returns due to garment faults can lead to customer dissatisfaction and increased costs for the manufacturer.

Negative Reviews: Customers sharing negative experiences online can damage the brand's reputation and deter potential buyers.

Supplier Relations: Persistent faults may strain relationships with suppliers if there's a perceived lack of quality control.

Production Delays: The need for rework or adjustments can lead to delays in production schedules.

Waste Generation: Discarding or returning faulty knit garments contributes to increased waste, impacting both the environment and the sustainability of the brand.

Consumer Protection: If knit garments fail to meet quality standards or pose safety hazards, manufacturers may face legal consequences, including recalls or fines.

2.6 Remedies of Denim Garments Faults

Remedies for denim garment faults involve proactive measures throughout the production process, from material selection to finishing. Here's a discussion on effective remedies for common denim garment faults:

Fading and Discoloration:

Remedy: Implement improved dyeing processes and use high-quality dyes. Explore eco-friendly dyeing techniques to minimize environmental impact.

Prevention: Conduct thorough testing of dyeing processes, invest in color-fast dyes, and ensure proper washing and care instructions are provided to consumers.

Seam Puckering:

Remedy: Adjust sewing machine tension, use appropriate thread types, and employ skilled operators for seam construction.

Prevention: Regularly calibrate sewing machines, provide ongoing training to operators, and implement strict quality control measures during the sewing process.

Ruptures and Tears:

Remedy: Enhance fabric strength through improved weaving or use stronger yarns. Reinforce stress-prone areas with additional stitching or support.

Prevention: Source high-quality denim fabric, conduct thorough testing for fabric strength, and reinforce critical areas during garment construction.

Misalignment of Components:

Remedy: Strengthen quality control checks at various stages, especially during pattern cutting and assembly. Implement clear guidelines for component alignment.

Prevention: Train pattern cutters and assemblers on precise component alignment, use cutting-edge technologies for pattern making, and conduct regular audits for alignment accuracy.

Uneven Dyeing:

Remedy: Upgrade dyeing machinery, implement consistent dyeing processes, and adopt advanced technologies like laser or ozone treatments for more even results.

Prevention: Regularly maintain and calibrate dyeing equipment, closely monitor dyeing parameters, and invest in innovative dyeing techniques.

Stitching Irregularities:

Remedy: Implement rigorous quality checks for stitching, utilize advanced sewing machines with automatic tension adjustment, and provide ongoing training for sewing machine operators.

Prevention: Regularly maintain sewing machines, calibrate tension settings, and invest in quality threads to minimize stitching irregularities.

Faulty Hardware or Accessories:

Remedy: Source high-quality hardware, conduct thorough inspections of accessories before assembly, and collaborate closely with reliable suppliers.

Prevention: Establish clear quality standards for accessories, communicate expectations to suppliers, and regularly audit and test accessories for durability.

Surface Defects (Pilling, Staining):

Remedy: Choose fabrics with higher resistance to pilling, incorporate anti-stain treatments, and provide clear care instructions for consumers.

Prevention: Prioritize fabric selection with anti-pilling properties, explore stain-resistant finishes, and educate consumers on proper care practices. By incorporating these remedies and preventive measures, denim manufacturers can address faults at various stages of production, ultimately improving the overall quality and longevity of denim garments. Regular training, collaboration with suppliers, and embracing innovative technologies are key components of a comprehensive strategy to minimize denim garment faults.

2.7 Remedies of Knit Garments Faults

Remedies for knit garment faults involve a combination of preventive measures, quality control protocols, and strategic interventions throughout the production process. Here's a discussion on effective remedies for common knit garment faults.

Snagging and Runs:

Remedy: Utilize finer yarns or blends with higher twist levels to minimize snagging. Implement careful handling procedures during production and packaging.

Prevention: Invest in yarn quality testing, employ anti-snagging finishes, and educate consumers on proper garment care to reduce the risk of snagging.

Pilling:

Remedy: Use longer staple fibers or blended yarns with anti-pilling properties. Employ finishing treatments to reduce pilling and improve fabric durability.

Prevention: Conduct thorough fabric testing for pilling resistance, apply anti-pilling finishes during manufacturing, and provide consumers with guidance on proper garment care to minimize pilling.

Seam Slippage:

Remedy: Reinforce seams with additional stitching or stabilizing tapes. Adjust sewing machine settings to achieve optimal stitch tension.

Prevention: Implement strict quality control measures during sewing, use appropriate seam construction techniques, and conduct regular seam strength tests.

Hole Formation:

Remedy: Patch or repair holes using compatible fabric patches or fusible interfacing. Strengthen high-stress areas with additional stitching or reinforcements.

Prevention: Source durable knit fabrics, reinforce critical areas during construction, and conduct rigorous quality checks for fabric integrity.

Distortion of Knit Structure:

Remedy: Block or reshape distorted areas during finishing processes. Use steam or heat treatments to restore fabric elasticity and shape.

Prevention: Ensure proper fabric handling and tension control during production, employ experienced operators for finishing processes, and invest in equipment for fabric reshaping.

Tension Irregularities:

Remedy: Adjust knitting machine settings to achieve uniform tension throughout the fabric. Repair or re-knit sections with noticeable tension irregularities.

Prevention: Regularly maintain knitting machines, calibrate tension settings, and provide operators with training on tension adjustment techniques.

Poor Finishing:

Remedy: Trim or re-hem garment edges to achieve a neat finish. Use quality thread and sewing techniques for finishing operations.

Prevention: Implement rigorous quality checks during finishing, invest in skilled personnel for sewing and trimming operations, and prioritize the use of high-quality finishing materials.

**Color Inconsistencies:**

Remedy: Conduct color correction treatments or spot dyeing to address inconsistencies.

Use color-fast dyes and proper dyeing techniques during production.

Prevention: Maintain consistency in dyeing processes, conduct thorough color matching tests, and invest in high-quality dyes and pigments.

Chapter-3: Methodology



3.1. Information Gathering

From the factory, we have gathered secondary data. After 15 days, we have gathered a total of 14 quality reports.

3.2. Inspection Report Attached:

3.2.3 Report on Inspection No. 3



QUALITE / QUALITY

COMMANDE N° / ORDER N°

40658001

MARQUE / BRAND

OBAIBI

COLORIS / COLORS

Rayures bleu /
171

N° RAPPORT D'INSPECTION
/ INSPECTION REPORT N°

DK_OKA_46422

CRITICAL AND MAJOR DEFECT							
DEFECT CATEGORY	NATURE DES DEFAUTS / DEFECTS	NOMBRE DE DEFECTUEUX / N° OF DEFECTS PIECES			OBSERVATIONS / COMMENTS		
		DEFAUTS MINEURS / MINORS DEFECTS	DEFAUTS MAJEURS / MAJORS DEFECTS	DEFAUTS CRITIQUES / CRITICAL DEFECTS	taille / size of defects	position / position of defects	
5.6	poor shape		4			Armhole	D1 to D4
1.2	knitting defects		1			Sleeve	D5
1.2	knitting hole		1			Back	D6
1.3	fabric damage		1			Back	D7
2.3	dirty stain no removable		1			Back	D8
3.12	wrong position accessory		1			Woven tape joint reverse	D9
	TOTAL		9	0			

MINOR DEFECT							
DEFECT CATEGORY	NATURE DES DEFAUTS / DEFECTS	NOMBRE DE DEFECTUEUX / N° OF DEFECTS PIECES			OBSERVATIONS / COMMENTS		
		DEFAUTS MINEURS / MINORS DEFECTS	DEFAUTS MAJEURS / MAJORS DEFECTS	DEFAUTS CRITIQUES / CRITICAL DEFECTS	taille / size of defects	position / position of defects	
5.6	poor shape	3				Armhole	D10,D11
5.6	poor shape	3				Side seam	D12,D13
2.3	dirty stain removable	3				Back	D14,D15
5.8	uneven collar / Poor neck shape / Twisted collar	1				Neck	D16
5.8	Uneven shoulder, body	2				Stripe uneven	D17
5.5	uncut thread	1				Front	D18
5.6	poor shape	1				Bottom	D19
	TOTAL	14					

3.2.4 Report on Inspection No. 4



QUALITE / QUALITY

COMMANDE N° / ORDER N°

40350101+40350102+40350301

MARQUE / BRAND

JACADI

COLORIS / COLORS

BLANC JACADI /
701

N° RAPPORT D'INSPECTION
/ INSPECTION REPORT N°

DK_OKA_46433

CRITICAL AND MAJOR DEFECT							
DEFECT CATEGORY	NATURE DES DEFAULTS / DEFECTS	NOMBRE DE DEFECTUEUX / N° OF DEFECTS PIECES			OBSERVATIONS / COMMENTS		
		DEFAULTS MINEURS / MINORS DEFECTS	DEFAULTS MAJEURS / MAJORS DEFECTS	DEFAULTS CRITIQUES / CRITICAL DEFECTS	taille / size of defects	position / position of defects	
5.3	broken stitch		1			Bottom	D1
5.3	skipped stitch		1			Sleeve	D2
2.3	dirty stain no removable		1			Front	D3
3.7	slanted print		1			Front	D4
1.3	fabric loose		2			Armhole	D5,D6
	TOTAL		6	0			
MINOR DEFECT							
DEFECT CATEGORY	NATURE DES DEFAULTS / DEFECTS	NOMBRE DE DEFECTUEUX / N° OF DEFECTS PIECES			OBSERVATIONS / COMMENTS		
		DEFAULTS MINEURS / MINORS DEFECTS	DEFAULTS MAJEURS / MAJORS DEFECTS	DEFAULTS CRITIQUES / CRITICAL DEFECTS	taille / size of defects	position / position of defects	
5.6	poor shape	2				Bottom	D7
3.7	slanted print	1				Front	D8
5.8	uneven collar / Poor neck shape / Twisted collar	1				Neck	D9
5.6	poor shape	1				Armhole	D10
1.3	fabric loose	4				Armhole	D11,D12
5.6	poor shape	1				Side seam	D13
	TOTAL	10					

3.2.5 Report on Inspection No. 5



QUALITE / QUALITY

COMMANDE N° / ORDER N°

40349801+403498
02+40350001

JACADI

MARQUE / BRAND

JACADI

COLORIS / COLORS

BLANC JACADI /
701

N° RAPPORT D'INSPECTION
/ INSPECTION REPORT N°

DK_OKA_46434

CRITICAL AND MAJOR DEFECT							
DEFECT CATEGORY	NATURE DES DEFAULTS / DEFECTS	NOMBRE DE DEFECTUEUX / N° OF DEFECTS PIECES			OBSERVATIONS / COMMENTS		
		DEFAULTS MINEURS MINORS DEFECTS	DEFAULTS MAJEURS MAJORS DEFECTS	DEFAULTS CRITIQUES / CRITICAL DEFECTS	taille / size of defects	position / position of defects	
2.3	dirty stain no removable		2			Front	D1,D2
5.4	needle cut /damage		1			Placket edge	D3
3.7	slanted print		1			Chest print	D4
1.1	foreign yarn		1			Front	D5
TOTAL			5	0			

MINOR DEFECT							
DEFECT CATEGORY	NATURE DES DEFAULTS / DEFECTS	NOMBRE DE DEFECTUEUX / N° OF DEFECTS PIECES			OBSERVATIONS / COMMENTS		
		DEFAULTS MINEURS MINORS DEFECTS	DEFAULTS MAJEURS MAJORS DEFECTS	DEFAULTS CRITIQUES / CRITICAL DEFECTS	taille / size of defects	position / position of defects	
5.8	uneven collar / Poor neck shape / Twisted collar	2				Neck	D6
2.3	dirty stain removable	1				Sleeve	D7
3.7	slanted print	2				Chest print	D8
5.6	poor shape	1				Bottom shape	D9
5.6	poor shape	1				Placket shape	D10
TOTAL		7					

3.2.7 Report on Inspection No. 7



QUALITE / QUALITY

COMMANDE N° / ORDER N°

40532302

MARQUE / BRAND

OBAIBI

COLORIS / COLORS

jaune Jonquille / 32

N° RAPPORT D'INSPECTION
/ INSPECTION REPORT N°

DK_OKA_46463

CRITICAL AND MAJOR DEFECT							
DEFECT CATEGORY	NATURE DES DEFAULTS / DEFECTS	NOMBRE DE DEFECTUEUX / N° OF DEFECTS PIECES			OBSERVATIONS / COMMENTS		
		DEFAULTS MINEURS / MINORS DEFECTS	DEFAULTS MAJEURS / MAJORS DEFECTS	DEFAULTS CRITIQUES / CRITICAL DEFECTS	taille / size of defects	position / position of defects	
2.1	pencil mark		1			Fron	D1
5.3	broken stitch		1			Leg	D2
5.3	skipped stitch		1			Waist	D3
5.6	poor shape		3			Waist	D4-6
5.8	Uneven Sleeve, cuff, leg,etc		1			Up-down	D7
5.6	poor shape		1			Waist	D8
	TOTAL		8	0			
MINOR DEFECT							
DEFECT CATEGORY	NATURE DES DEFAULTS / DEFECTS	NOMBRE DE DEFECTUEUX / N° OF DEFECTS PIECES			OBSERVATIONS / COMMENTS		
		DEFAULTS MINEURS / MINORS DEFECTS	DEFAULTS MAJEURS / MAJORS DEFECTS	DEFAULTS CRITIQUES / CRITICAL DEFECTS	taille / size of defects	position / position of defects	
5.3	puckering / wrong stitching density	3				Waist	D9-10
5.8	Uneven Sleeve, cuff, leg,etc	2				Leg	D11
5.6	poor shape	3				Waist	D12-13
5.6	poor shape	2				Waist	D14
5.5	uncut thread	3				Waist	D15-16
	TOTAL	13					

3.2.10 Report on Inspection No. 10

**QUALITE / QUALITY**

COMMANDE N° / ORDER N°

40567502

MARQUE / BRAND

OKAIDI

COI ORIS / COI ORS

Vert Amande /
217

N° RAPPORT D'INSPECTION
/ INSPECTION REPORT N°

DK_OKA_46568

CRITICAL AND MAJOR DEFECT							
DEFECT CATEGORY	NATURE DES DEFAUTS / DEFECTS	NOMBRE DE DEFECTUEUX / N° OF DEFECTS PIECES			OBSERVATIONS / COMMENTS		
		DEFAUTS MINEURS / MINORS DEFECTS	DEFAUTS MAJEURS / MAJORS DEFECTS	DEFAUTS CRITIQUES / CRITICAL DEFECTS	taille / size of defects	position / position of defects	
5.3	broken stitch		1			Front pocket	D1
5.3	skipped stitch		1			Under waist	D2
5.6	poor shape		1			Side seam	D3
1.3	fabric loose		1			Waist belt	D4
2.3	oil stain		1			Front	D5
2.2	shade variation on same piece		1			Back pocket	D6
5.1	slanted pocket		1			Back pocket	D7
5.1	asymetric pocket		1			Back pocket	D8
	TOTAL		8	0			

MINOR DEFECT							
DEFECT CATEGORY	NATURE DES DEFAUTS / DEFECTS	NOMBRE DE DEFECTUEUX / N° OF DEFECTS PIECES			OBSERVATIONS / COMMENTS		
		DEFAULTS MINEURS / MINORS DEFECTS	DEFAULTS MAJEURS / MAJORS DEFECTS	DEFAULTS CRITIQUES / CRITICAL DEFECTS	taille / size of defects	position / position of defects	
5.5	uncut thread	1				Back	D9
2.1	Chalk mark	2				Front pocket	D10
5.8	Uneven Sleeve, cuff, leg,etc	2				Waist rib uneven	D11
5.1	slanted pocket	1				Back pocket	D12
5.1	poor shape pocket	2				Front pocket	D13
2.3	oil stain	1				Back	D14
5.6	poor shape	4				Side seam	D15-16
	TOTAL	13					

3.2.12 Report on Inspection No. 12



QUALITE / QUALITY

COMMANDE N° / ORDER N°

40668201

MARQUE / BRAND

OKAIDI

COLORIS / COLORS

Marron Epice /
759

N° RAPPORT D'INSPECTION
/ INSPECTION REPORT N°

DK_OKA_46571

CRITICAL AND MAJOR DEFECT							
DEFECT CATEGORY	NATURE DES DEFAUTS / DEFECTS	NOMBRE DE DEFECTUEUX / N° OF DEFECTS PIECES			OBSERVATIONS / COMMENTS		
		DEFAUTS MINEURS / MINORS DEFECTS	DEFAUTS MAJEURS / MAJORS DEFECTS	DEFAUTS CRITIQUES / CRITICAL DEFECTS	taille / size of defects	position / position of defects	
1.2	knitting defects		3			Front, Sleeve	D1-3
2.3	dirty stain no removable		2			Front	D4-5
2.3	oil stain		2			Front, Armhole	D6-7
5.4	needle cut /damage		1			Armhole	D8
2.2	shade variation on same piece		1			Front to back	D9
	TOTAL		9	0			

MINOR DEFECT							
DEFECT CATEGORY	NATURE DES DEFAUTS / DEFECTS	NOMBRE DE DEFECTUEUX / N° OF DEFECTS PIECES			OBSERVATIONS / COMMENTS		
		DEFAUTS MINEURS / MINORS DEFECTS	DEFAUTS MAJEURS / MAJORS DEFECTS	DEFAUTS CRITIQUES / CRITICAL DEFECTS	taille / size of defects	position / position of defects	
1.2	knitting defects	6				Front, back, sleeve	D10-11
5.5	unmatching thread	2				Back, neck	D12
2.3	oil stain	2				Front, back	D13
5.1	slanted pocket	1				Front	D14
5.3	poor linking / Poor joint stitch	2				Front	D15
1.3	fabric loose	1				Front	D16
	TOTAL	14					

3.2.13 Report on Inspection No. 13



QUALITE / QUALITY

COMMANDE N° / ORDER N°

40669601

MARQUE / BRAND

OKAIDI

COLORIS / COLORS

Bleu faience /
153

N° RAPPORT D'INSPECTION
/ INSPECTION REPORT N°

DK_OKA_46639

CRITICAL AND MAJOR DEFECT							
DEFECT CATEGORY	NATURE DES DEFAULTS / DEFECTS	NOMBRE DE DEFECTUEUX / N° OF DEFECTS PIECES			OBSERVATIONS / COMMENTS		
		DEFAULTS MINEURS / MINORS DEFECTS	DEFAULTS MAJEURS / MAJORS DEFECTS	DEFAULTS CRITIQUES / CRITICAL DEFECTS	taille / size of defects	position / position of defects	
5.4	needle cut /damage		1			Sleeve	D1
1.2	knitting hole		1			Back	D2
5.3	broken stitch		1			Sleeve	D3
2.3	dirty stain no removable		3			Front, waist	D4 to D6
5.6	poor shape		1			Side seam	D7
2.3	oil stain		1			Back	D8
2.2	shade variation on same piece		1			Grade 3/4	D9
3.7	poor finition print / flock		2			Front, waist	D10,D11
5.3	puckering / wrong stitching density		1			Sleeve	D12
	TOTAL		12	0			

MINOR DEFECT							
DEFECT CATEGORY	NATURE DES DEFAULTS / DEFECTS	NOMBRE DE DEFECTUEUX / N° OF DEFECTS PIECES			OBSERVATIONS / COMMENTS		
		DEFAULTS MINEURS / MINORS DEFECTS	DEFAULTS MAJEURS / MAJORS DEFECTS	DEFAULTS CRITIQUES / CRITICAL DEFECTS	taille / size of defects	position / position of defects	
2.3	printing stain	1				Front	D13
1.1	foreign yarn	2				Sleeve, front	D14
2.3	oil stain	5				Front, back, sleeve	D15,D16
2.3	dirty stain removable	3				Waist	D17,D18
5.6	poor shape	1				Side seam	D19
5.6	poor shape	2				Bottom	D20
3.7	poor finition print / flock	2				Front	D21
5.5	uncut thread	2				Bottom, sleeve	D22
5.3	puckering / wrong stitching density	2				Sleeve	D23
	TOTAL	20					

3.2.14 Report on Inspection No. 14



QUALITE / QUALITY

COMMANDE N° / ORDER N°

40137501

MARQUE / BRAND

OKAIDI

COLORIS / COLORS

Imprimé
multicolore / 916

N° RAPPORT D'INSPECTION
/ INSPECTION REPORT N°

DK_OKA_46835

CRITICAL AND MAJOR DEFECT							
DEFECT CATEGORY	NATURE DES DEFAULTS / DEFECTS	NOMBRE DE DEFECTUEUX / N° OF DEFECTS PIECES			OBSERVATIONS / COMMENTS		
		DEFAULTS MINEURS / MINORS DEFECTS	DEFAULTS MAJEURS / MAJORS DEFECTS	DEFAULTS CRITIQUES / CRITICAL DEFECTS	taille / size of defects	position / position of defects	
5.3	broken stitch		1			Waist	D1
5.3	skipped stitch		2			Waist	D2,D3
2.3	dirty stain no removable		3			Front, back	D4 to D6
1.2	knitting defects		2			Back	D7,D8
1.1	foreign yarn		3			Front, back, sleeve	D9 to D11
5.3	missing stitching		1			Bottom tuck	D12
1.2	knitting hole		1			Front	D13
	TOTAL		13	0			
MINOR DEFECT							
DEFECT CATEGORY	NATURE DES DEFAULTS / DEFECTS	NOMBRE DE DEFECTUEUX / N° OF DEFECTS PIECES			OBSERVATIONS / COMMENTS		
		DEFAULTS MINEURS / MINORS DEFECTS	DEFAULTS MAJEURS / MAJORS DEFECTS	DEFAULTS CRITIQUES / CRITICAL DEFECTS	taille / size of defects	position / position of defects	
1.1	foreign yarn	6				Front, back, sleeve	D14,D15
2.3	dirty stain removable	4				Front, back	D16,D17
5.6	poor shape	2				Bottom	D18
5.8	uneven collar / Poor neck shape / Twisted collar	2				Neck	D19
1.3	fabric loose	1				Armhole area	D20
5.5	uncut thread	5				Waist, bottom	D21,D22
	TOTAL	20					

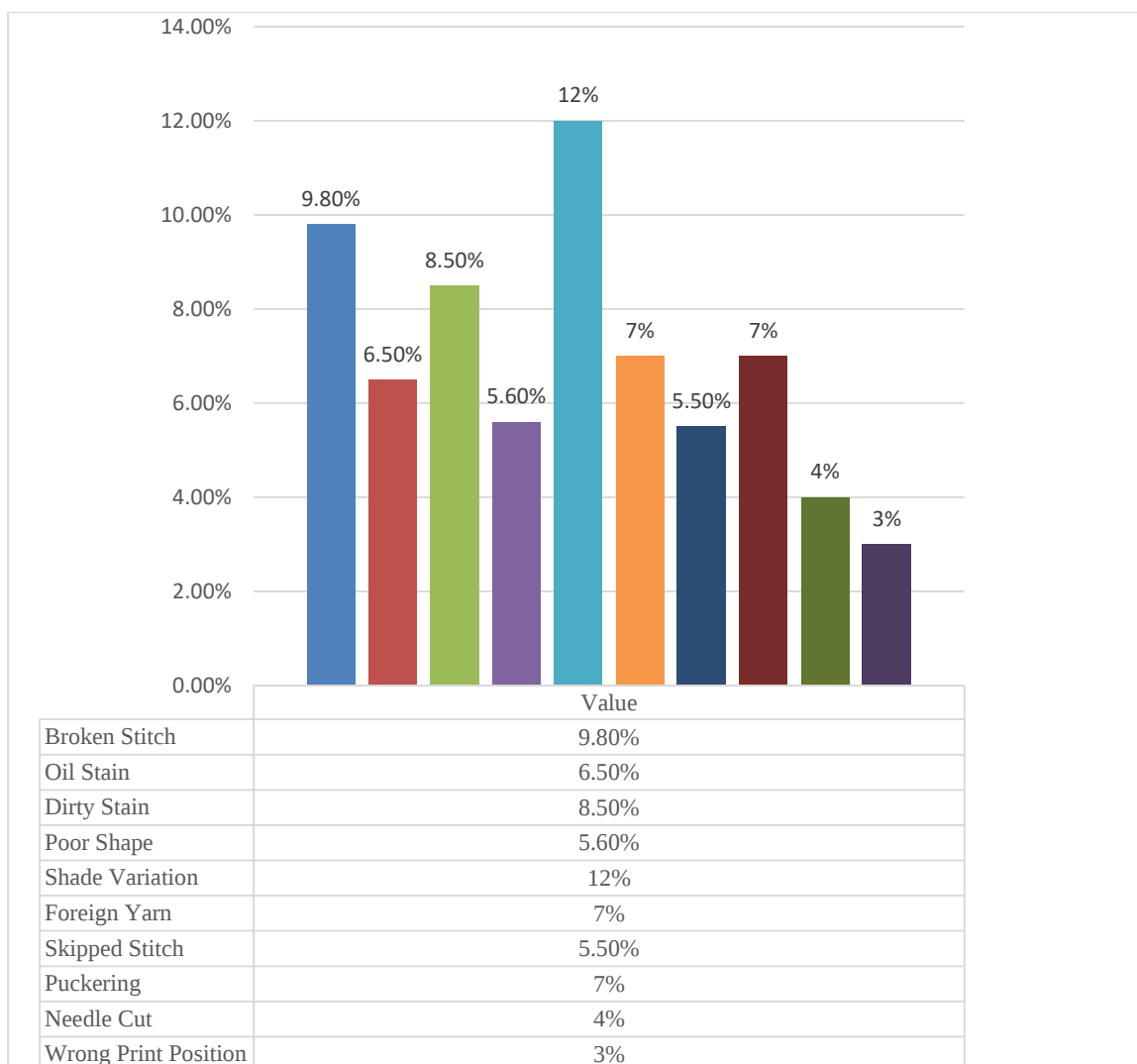


Chapter-4: Results and Discussion

4.1 Quality Inspection Result

We discovered a variety of causes for clothing flaws. Thus, we have examined the outcome. The computed outcome is-

No. of Inspection Report	Check pcs	Broken Stitch	Oil Stain	Dirty Stain	Poor Shape	Shade Variation	Foreign Yarn	Skipped Stitch	Puckering	Needle Cut	Wrong Print Position	Total Defects
1	200	1	0	1	1	1	0	0	1	0	0	10
2	125	0	0	1	0	1	0	0	1	0	0	7
3	300	2	1	2	1	2	1	1	1	1	2	15
4	300	3	2	1	1	3	1	1	2	1	0	16
5	200	0	1	1	1	1	1	1	1	1	0	8
6	125	0	1	0	1	1	1	1	0	1	0	9
7	200	1	2	1	1	1	1	0	0	1	0	12
8	200	2	0	1	1	1	1	0	0	1	0	11
9	125	1	0	1	1	1	1	1	1	1	0	10
10	200	1	0	1	1	2	1	1	2	0	0	14
11	315	2	2	2	1	3	1	1	1	0	0	19
12	315	2	1	1	0	2	1	2	1	0	3	17
13	125	1	0	0	0	0	1	0	0	0	0	11
14	200	0	1	1	0	1	1	0	1	0	0	8
Total	2930	16 (9.8%)	11 (6.5%)	14 (8.50%)	10 (5.60%)	20 (12%)	12 (7%)	9 (5.5%)	12 (7%)	7 (4%)	5 (3%)	167



4.2 10 Major defects of Garments: -

- i. Broken stitch- 9.8%
- ii. Oil stain- 6.5%
- iii. Dirty stain- 8.5%
- iv. Poor shape- 5.6%
- v. Shade variation- 12%
- vi. Foreign yarn- 7%
- vii. Skipped stitch- 5.5%
- viii. Puckering- 7%
- ix. Needle cut- 4%
- x. Wrong print position- 3%

4.3 Major Defects: Definition, Illustration, Reasons, and Solutions

4.3.1 Broken Stitch- 9.8%: It is not a stitch that is continuous.



Fig 4.1: Frayed Edge

Causes:

- Incorrect sewing caused it to happen;
- Unawareness on the part of the worker

Remedy:

- Regular inspection for damage is necessary for the needle plate, presser foot, and feed dog.
- Appropriate machine usage.
- Correct trimming technique

4.3.2 Oil Stain- 6.5%: Oil stains become more noticeable as a result of residue sticking to the surface and causing recoloring. can lead to the product failing, decreasing its usability and marketability.



Fig 4.2: Oil Stain

Causes:

- Failure to apply the appropriate lubricant
- For the operator, it can be done if the machine parts are not clean
- Dust from nature.

Solution:

- Using lubricating oil appropriately.
- Easy-to-use flooring in all situations
- Appropriate machine assistance
- Proper cleaning of machine.

4.3.3 Dirty Stain- 8.5%: A dirty stain on garments refers to any unwanted mark or discoloration that appears on clothing due to contact with substances like food, beverages, dirt, ink, cosmetics, or other materials.



Fig 4.3: Dirty Stain

Causes:

- If machinery or equipment used in the production process is not properly cleaned or maintained.
- Dust, dirt, or airborne particles in the factory environment can settle on garments during production, causing stains.

Remedies:

- Ensure that machinery and equipment used in the production process are regularly cleaned and maintained
- Take measures to control the factory environment, such as minimizing dust, dirt, or airborne particles, to reduce the risk of contamination on garments during production.

4.3.4. Poor Shape- 5.6%: Garments that do not conform to the intended design specifications or have irregularities in their shape, fit, or appearance during the manufacturing process.



Fig 4.4: Poor Shape

Causes:

- If the patterns used for cutting fabric pieces are not accurately graded.
- Variations in fabric quality, such as uneven stretching, warping, or defects, can contribute to poor garment shape.

Remedies:

- Ensure that patterns are accurately graded to reflect the intended garment sizes and shapes.
- Ensure fabric quality.

4.3.5 Shade Variation- 12%: Shade variation in fabric refers to differences in shade, or the intensity of color or hue, across rolls or pieces that were meant to match.



Fig 4.5: Shade Variation

Causes:

- Variation in dyeing recipes between batches
- Mixing of fabrics used in production
- Poor lab-to-bulk correlation
- Changes in the pace and duration of the production process
- Inaccurate numbering, bundling, or cutting
- Dyeing machines issues

Remedies:

- First, the wash is done according to the recipe prescribed by the buyer, after the wash is done, the shades have to be sorted by grade. The goods have to be washed according to the shade.
- Shades that do not match the approved shade should be re-dyed and matched. In the next batches, color dosing should be done very slowly so that even if it reaches all the garments, in the same way, then the shade variation will be less.

4.3.6 Skipped stitch- 5.5%: Where stitches are missed or not formed properly during the sewing process.



Fig 4.6: Skipped Stitch

Causes:

- Inaccurate timing of the hook or looper and needle entry into the loop.
- An uneven tension on the upper or lower loop of the thread.
- Because the needle veered.
- If the loop size of the needle thread is too tiny.
- If the sewing thread is unable to make a loop;
- When flagging of textiles occurs while stitching

Solutions:

- Check the distance and time between the hook or looper and the needle.
- The thread's tension has to be changed.
- It is time to change the needle.
- Thread and needle size need to be changed.
- The pressure foot's adjustment needs to be precise.
- It's time to update the thread

4.3.7 Puckering- 7%: Usually, it occurs when there is an excessive amount of cloth and insufficient thread in the seam. One of the most common sewing flaws on fabric is puckering.



Fig 4.7: Puckering

Causes:

- Differential fabric stretches.
- Differential fabric dimensional instability.
- Tension of sewing thread.
- Shrinkage of sewing machine.
- Structural jamming.
- Unmatched pattern.

Remedies:

- Puckering is a boon when we talk of denim shirt, trousers. We needed this defect to create effect after washing.
- There are micro forces present while handling fabrics, stitches.
- Selection of right needle point is also very important aspect to reduce puckering.
- Fabric should be stitched according to the grain line reduce the puckering.

Chapter-5: Conclusion



5.1 Conclusion

We have completed our thesis following a thorough examination, testing, and discussion.

We have a great deal of experience with this project. The main people to blame for our factory's shortcomings are three people. Pay concerns, machine problems, and novel and diverse product varieties are a few instances of this. Management ought to establish an IE department in order to increase output and decrease errors. Therefore, if all causes are limited, higher production of defect-free items can be achieved.