

THREAD TO TEXTILE: MAKING FABRIC WITH A SEWING MACHINE

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ABSTRACT

This project, titled “Thread to Textile: Making Fabric with Sewing Machine Stitching,” explores an innovative and sustainable approach to fabric development by converting waste threads into textile surfaces using sewing machine techniques. Traditionally, fabrics are produced through weaving, knitting, or non-woven processes, which require significant time, energy, and resources. In contrast, this study investigates an alternative method where loose threads are directly transformed into fabric through continuous stitching. The primary objective of the study is to develop fabric structures using waste threads and evaluate the feasibility of sewing machine stitching as a method of textile formation. Waste threads collected from garment production units were arranged in layers and stitched repeatedly using an overlock sewing machine. Through this process, the threads were interlocked to form stable, flexible, and fabric-like structures.

Several samples were developed by varying thread arrangements and stitch density. The produced textile samples were analyzed based on their texture, strength, flexibility, and appearance. Basic textile testing methods such as tensile strength, bursting strength, shrinkage, thread consumption, and color fastness were used to evaluate performance. The findings reveal that stitching techniques can successfully convert waste threads into usable textile materials. The strength and durability of the fabric depend largely on stitch density and thread arrangement. The developed fabrics showed moderate strength, good flexibility, acceptable shrinkage, and satisfactory color stability. Additionally, the technique produced unique textures and patterns, offering creative possibilities in textile design.

This study highlights the importance of recycling textile waste and demonstrates that sewing machine stitching can serve as an alternative and eco-friendly fabric production method. The research contributes to sustainable textile development and opens new opportunities for innovation in fabric creation.

Keywords: Thread to Textile, Sewing Machine Stitching, Waste Thread Utilization, Sustainable Textile, Fabric Development.

INTRODUCTION

The textile industry is one of the most important sectors in the world, producing fabrics that are essential for everyday life. Traditionally, fabrics are created through methods such as weaving, knitting, and non-woven processes, which require multiple stages, specialized machinery, and significant resources. In recent years, there has been a growing need to explore alternative methods of fabric production that are cost-effective, innovative, and environmentally sustainable. One such approach is the concept of converting threads directly into textile surfaces using sewing machine stitching techniques.

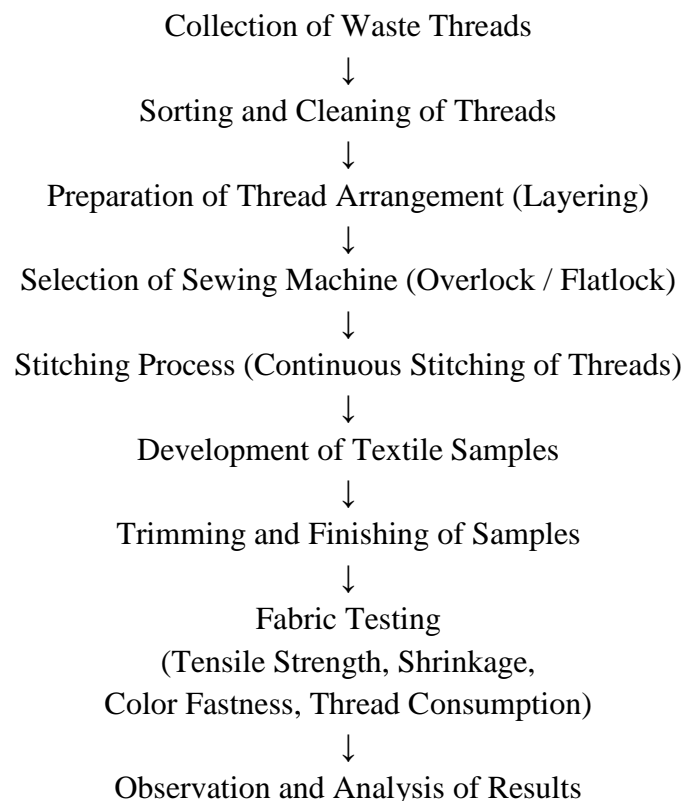


Thread to fabric

This project focuses on the idea of “Thread to Textile,” where waste threads are transformed into fabric-like structures through continuous stitching using sewing machines such as overlock and flatlock machines. By layering and stitching threads repeatedly, a stable and flexible textile surface can be developed without traditional fabric formation methods. This method not only encourages creativity in textile design but also promotes sustainability by reusing waste materials, reducing environmental impact, and providing a new direction for experimental textile development.

METHODOLOGY

The overall experimental procedure followed in this study is illustrated below:



CONCLUSION

The present study on “*Thread to Textile: Making Fabric with Sewing Machine Stitching*” successfully demonstrated an innovative approach to fabric development by converting waste threads into textile surfaces. The experiment proved that loose threads can be effectively transformed into fabric-like materials through continuous stitching using an overlock sewing machine. By arranging and stitching threads in layers, a stable, flexible, and visually unique textile structure was created without using

traditional fabric formation methods such as weaving or knitting. The results of the study showed that the developed textile samples possess moderate strength, good flexibility, acceptable shrinkage, and satisfactory color stability. It was also observed that stitch density and thread arrangement play a crucial role in determining the strength and durability of the fabric. In addition to technical performance, the method produced interesting textures and patterns, highlighting its potential for creative textile design.

Overall, this project emphasizes the importance of sustainability in textile production by utilizing waste threads that would otherwise be discarded. The study concludes that sewing machine stitching can be used not only for garment construction but also as an alternative method for fabric creation. This approach opens new possibilities for eco-friendly textile development, recycling practices, and innovative design in the textile industry.

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