Chapter 8

INVESTIGATION OF COTTON WASTE IN WEAVING

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INTRODUCTION

Textile products used for covering and protection, which is one of the most important human needs, have been trading for centuries. In this context, yarn making, weaving and sewing processes such as BC. It has been practiced since 5000 years[1]. Weft wastes constitute one of the most important problems of enterprises that have such a long history and work on weaving. Businesses are trying to reduce the waste that emerges in the 21st century global competition environment as much as possible. The dense waste of weft yarns that contain natural or man-made fibers is a serious environmental and industrial problem.

Waste is production wastes which are far from reaching the main target in production consisting of various substances, short fiber particles and flying fibers that are separated from the raw material for any reason at various stages of production[2].

The raw material of the textile sector is cotton. In recent years, although different materials other than cotton have been used, cotton has been used extensively. During the field and transportation of cotton during the production process, elements such as foreign materials, dust and soil come with the cotton to the enterprises. Businesses need to be free from cotton during production. These substances are called waste. In order to ensure the quality of the cotton before the fabric weaving, it is separated as a waste in the clean fibers while cleaning the foreign materials. This situation is reflected on the production cost and exceeds the expectations.

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RESULTS

As a result of the examination of the properties of woven fabrics obtained by using conventional ring, compact and magnetic compact yarns, it was observed that some of the yarn characteristics are reflected in woven fabrics.

Ring, compact and magnetic compact yarns weft and warp yarns according to the state of the effect of woven fabrics according to the direction of the fabric according to the different views were determined according to the results of the research. Due to the width of the spinning triangle in fabrics woven with Rink yarns, the fibers are wrapped irregularly to the yarns, causing an uncomfortable appearance. In addition, this system is not economical for thick and medium thin yarns.

Compact yarns have a positive effect on the strength and surface properties of the yarn structure by narrowing the spinning triangle. It has a smoother appearance than the fabrics woven with Ring yarns. Compact yarns have features such as high fabric break and tear values, low Pilling tendency, high wear resistance and high brightness.

In the magnetic compact yarn production system, the spinning triangle is eliminated compared to the other two yarn production systems and the spinning process is carried out with a magnetic field. Thus, the cost of air intake system is eliminated. With this system, the profitability rates were increased by minimizing the cost increases experienced in the production process.

Keywords : Yarn, Waste, Weaving, Textile, Economy

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