

## **Effect of yarn number on the deviation angle and properties of Jersey fabrics produced by knitting machines**

**Dr. Tariq Ahmed Mahmoud Al-Khouly**

Ministry of Industry and Foreign Trade

**Dr. Hussein Sayed Ali Maabad**

Lecturer, Faculty of Industrial Education - Beni Suef University

### **Abstract:**

The knitting industry is considered one of the most important textile industries, with its coverage of all uses at the local level, where it has been able to meet the needs of the market with an export surplus after these products were of imported goods. The dimensional stability of knitted fabrics is one of the many topics discussed in the textile industry. Many indicate that the knitting industry is considered an arts before it is considered an integrated science, because of the potential of this industry in producing fabrics with different drawings by using needles in a mechanical way instead of the fingers of the hand, which are still used to produce some types of knitted fabrics. Research problem: It is known that the greater the angle of deviation (the columns on the lines) in the jersey fabrics of the jersey, the more this negatively affects the final specification of the fabric. This problem is one of the biggest obstacles facing circular knitwear (knit the weft), and from here we had to find solutions To this problem by using threads and materials with natural and mechanical properties as well as production methods that positively achieve the final specifications of the product. Importance of the research: Using a suitable filament tiger with the appropriate gage to achieve the best deflection angle, using a suitable number of feeders (feed) to give the best deflection angle, reaching the best square meter weight achieving the best deflection angle. Reaching the most suitable string thread that achieves the best deflection angle. Research Methodology: Descriptive and analytical experimental method. The research is based on five hypotheses, the number of feeders (feeders) used in the machine affects the angle of deflection, the difference of the thread of yarns used has an effect on the angle of deflection, the difference in the weight of square meters of the produced fabric affects the angle of deflection, the type of thread material used (cotton)., Presence A relationship between these previous characteristics and each other. Research Objectives: To reach the most appropriate angle of deviation by using different threads from a tiger using the cotton material, as well as to reach the best angle of deviation by controlling the number of nutrients (makakis). And to the most appropriate angle of deviation by controlling the weight of square meters.

### **Keywords:**

**Yarn Number  
Shrinkage  
Skew Angle  
Yarn Gauge.**

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