

## **THE QUALITY OF FANCY YARN: PART I: METHODS AND CONCEPTS**

**MALEK ALSHUKUR**

School of Textiles and Design, Heriot-Watt University, Galashiels, The UK.

Department of Mechanical Engineering of Textile Industries and Their Technologies,

Faculty of Mechanical and Electrical Engineering, Damascus University, Damascus, Syria.

### **ABSTRACT**

This article aims to introduce new quantitative concepts and parameters which may be used objectively to account for the structure and quality of several types of fancy yarns which have multiple-thread structure. Those concepts and parameters were divided into two groups. The first group pertains to fancy yarns where the effect profile or project is not elongated in shape. The parameters of this group were the Number of Fancy Profiles, the Size of Fancy profile, the Circularity Ratio of Fancy Profile, the Shape Factor of Fancy Yarn, and the Relative Shape Index of Fancy Yarn. However, the parameters and concepts of second group are related to fancy yarns where the effect profiles and projects are elongated in shape. These parameters were the Actual Length of Elongated Fancy Profile, the Total Length of Elongated Fancy Profiles and the Fancy Length Index of Fancy Yarn. To apply those concepts and parameters, suitable methods were also presented in details to help fancy yarn spinners and buyers use them. The concepts and parameters of each group were introduced as complete packages to assess the structural features and quality of fancy yarns. This article may make the subject of quality of fancy yarn reach a new perspective where quantitative methods can be used effectively to assess the structure and quality of fancy yarn without relying on the subjective judgement of experts on fancy yarn.

**KEYWORDS:** Fancy Yarn Quality & Fancy Yarn Structure