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Preliminary Data-Base System for the Fabric Structural Design

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Abstract: This topic surveys the basic procedure of data base system of the fabric structural design which can be linked with existing pattern design and garment design CAD systems. For this purpose, the theoretical and empirical equations related to the fabric structural design are analyzed and discussed. The fabric structural parameters such as weave density coefficient, cover factor and yarn density coefficient of various kinds of fabrics are calculated using the empirical equations. These calculated fabric structural parameters of many kinds of polyester, nylon, worsted and cotton fabrics are compared and discussed with weave pattern, weaving loom and materials according to weaving manufacturer. Furthermore the difference between fabric structural parameters calculated by empirical equations are analyzed with polyester, nylon, worsted and cotton fabrics, and these structural parameters are analyzed and discussed with weave and finishing shrinkages. Finally, the case study of the data base system for fabric structural design is presented with weave pattern, weaving loom and weaving manufacturer, and also presented with the application fields to the existing woven fabric and clothing CAD systems.

Key Words: [Weave density coefficient](#), [KES](#), [FAST](#), [Weave factor](#), [Weave shrinkage](#)

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