

폴리에스테르 직물의 공정수축특성과 직물구조인자와의 상관성연구

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This paper surveys correlation between fabric structural parameters such as warp and weft densities of the fabrics, and weft twist and processing shrinkage of the fabrics in relax and pre-set. For the purpose of this objective, specimens with various warp and weft densities, twists, and weft linear densities are prepared for the plain and satin weaves, respectively. All the specimens were processed into finishing process, and processing shrinkages in the relax and pre-set processes of the finishing were measured. Mechanical properties of these fabrics were measured by KES-FB System. Analysis¹⁾⁻⁷⁾ related to the mechanical properties are referenced.

The main conclusions from this study are as follows.

Fabric shrinkage after rotary washer and pre-set is linearly increased with weft yarn twist. Wet shrinkage, which is after rotary washer, of plane weave to 6000 twist multiplier is about from 7% to 9% which is level of yarn shrinkage, but for satin weave is above 10%. Dry shrinkage, which is after pre-set, of plane weave to 6000 twist multiplier is also from 14% to 16%, which is level of yarn shrinkage, but for satin weave, is above 18%. Comparing with plane and satin weave, satin shows higher shrinkage in the weft direction after rotary washer, and satin shows higher shrinkage in the shrinkage difference in the warp direction after rotary washer and pre-set.