카페트의 내구성과 실의 꼬임 특성

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Fibre breakage, carpet crushing and tuft matting are the mechanisms producing wear in cut pile carpet. Carpet appearance retention is defined as the resistance to visible change in a carpet subjected to foot traffic : The first section of this research examines some of the major causes of appearance loss in tufted pile carpets due to foot traffic. And deformation modes in tufted pile carpets due to foot traffic are discussed, and a brief review is given of existing research in this field. Carpet appearance retention depends greatly on the mechanical and physical properties of the yarns as well as carpet geometry. Therefore, three different types of buckling under the action of compressive end loads in a 2-ply are discussed i.e. a) Flexual buckling b) Flexual-torsional buckling c) Torsional buckling. The mode of buckling will be determined by the slenderness ratio (=length of yarn under buckling / yarn diameter), folding twist angle, single yarn's bending & torsional properties. And the frictional resistance to seperate torque of plied yarn will be discussed by using self twist yarn mechanics.