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Influence of Curvature Radius and Compression Energy on Clothing Pressure of Cylinder Model

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Abstract: This paper described how the compression energy and the curvature radius of cylinder model influenced the clothing pressure. The rubber band pressed the cylinder with different curvature radius or compression energy and the pressure between the cylinder and the rubber band was measured by the film sensor sheet. As the results, it was found that the pressure between the cylinder and the rubber band was in inverse proportion to its curvature radius, and the relation among the pressure (P), the tensile stress (T), and the curvature radius (r) was suggested by the modified Kirk's equation ($P=KT/r + C$). The pressure of the cylinder with different compression property was related to the compression energy (WC) value of the cylinder.

Key Words: [Clothing pressure](#), [Curvature radius](#), [Compression energy](#), [Kirk's equation](#), [Cylinder model](#)

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