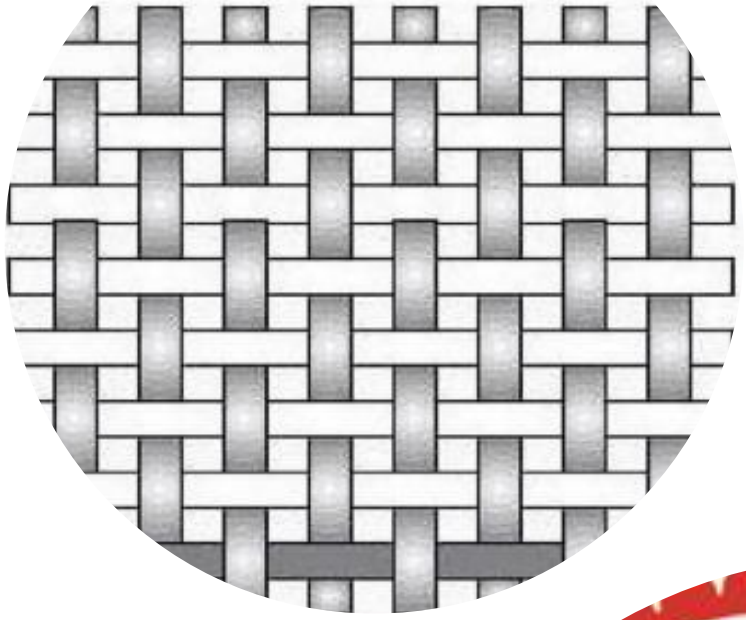
# Fabric Manufacturing I (TXL231)

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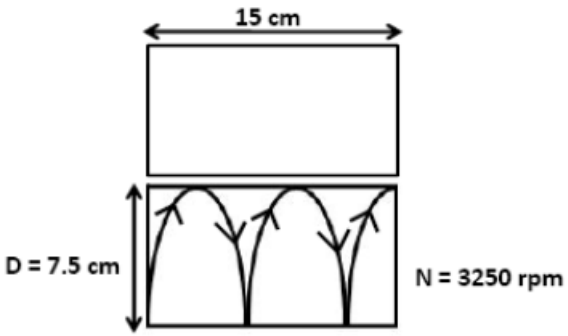
P1. The empty diameter of a spindle-driven cylindrical package is 5 cm. The spindle speed is 2000 r.p.m. and traverse velocity is 100 m/min. Determine:
a) Winding speed and angle of wind at the start
b) Winding speed and angle of wind when package diameter becomes double

P2. A cheese of 150 mm traverse length is wound on a rotary traverse machine equipped with 75 mm diameter drums of 2.5 crossings. Calculate the winding speed and coil angle if the drum rotates at 3250 r.p.m.




P3. What is the nearest value of traverse ratio to 3 to prevent patterning in a cheese when the diameter is 5 cm? The yarn is made up of cotton fibre and the count is 20 Ne.

P4. a) For a spindle-driven winder when the package diameter is 10 cm the wind angle is 200. Determine the angle of wind when package diameter is 15 cm.
b) In a drum-driven winder the angle of wind is $30^{o}$. The drum having 5 cm diameter makes 5 revolutions for one double traverse. Calculate the length of the winding drum.