

Knitting Technology

Module - 11 : FAQ

Q1 Paying attention to numbering system of guide bars on Raschel system, write down lapping plan of the guide bars for producing a typical multiaxial warp knitted fabric.

Ans.: Guide bar 1: 10/01//

Guide bar 2: 00//

Guide bar 3: 00/11/22/...../ (n-1) (n-1)/ n n/ (n-1) (n-1)/...../33/22/11//

Guide bar 4: n n/ (n-1) (n-1)/...../33/22/11/00/11/22/...../ (n-1) (n-1)//

Q2 What problem would be encountered if the warp inlay in a multiaxial warp knitted fabric is operated by guide bar number 4 instead of guide bar number 2?

Ans.: The inlays in biased direction run across the fabric length and hence get trapped by threads of pillar stitch. However a warp inlay runs parallel to threads of pillar stitch and would not get trapped by the same. Hence it would float at the technical back side if it is operated by bar 4.

Q3 If the angle to the wale direction of threads inlaid in the bias directions in a multiaxial warp knitted fabric needs to be increased then which machine variable should be altered? Justify.

Ans.: The speed of rotational motion of the guide bars 3 and 4 as also that of the counter rotation of concerned machine elements decide the angle subtended to the wale direction of threads inlaid in the bias directions. A higher speed would increase the angles.

Q4 Is it possible to inlay threads only in one bias direction, and not simultaneously in both bias directions in a multiaxial warp knitted fabric? Justify

Ans.: If instead of two guide bars 3 and 4, only one is employed then the inlay thread in biased direction would be laid in one direction for a while after which the direction would be reversed. Hence indefinitely laying the threads only in one direction is not possible.

Q5 Is it possible to inlay threads in the bias directions in a multiaxial warp knitted fabric at two different angles to the wale direction? Justify

Ans.: The guide bars 3 and 4 have to move at the same speed and therefore angles in the two bias directions would be equal in magnitude but of opposite sign.

Q6 Keeping the production speed of a multiaxial warp knitting machine unaltered how can the spacing between inlay threads be varied with a view to varying the pore size of the resultant fabric?

Ans.: The pore size can be varied by (a) varying the count of yarns employed, (b) varying the machine gauge and (b) varying the speed of rotation of the rotating elements.