

Introduction:

A woven fabric is formed by the interlacement of two sets of yarn, namely, warp and weft yarns. These yarns are interlaced with one another according to the type of weave or design. Fabric structure and analysis of woven fabric are discussed in this article.

1. Discuss Briefly the Following Weaves**WARP RIBS**

Ribs & Cords are plain weaves structures in which considerable difference exist between the warp & the weft threads as regards to thickness, & number of threads per unit space. The term cord is frequently applied to a rib that runs the length of the cloth. These designs are found in unbalanced structures such as canvases & tarpaulin.

This is a plain weave in which two or more picks are inserted in the same shade. To form warp, rib the thick ends always passes over or under two or more, thick or fine pick as shown in fig-1 below & of 2-2 warp rib. Here the plain weave is extended for two picks. It is possible, however to have a 3-1-1-3 warp rib as shown in fig-2 below;

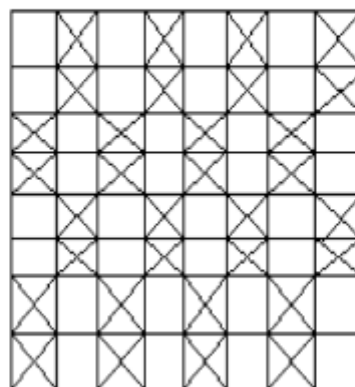


Fig 1: Warp rib

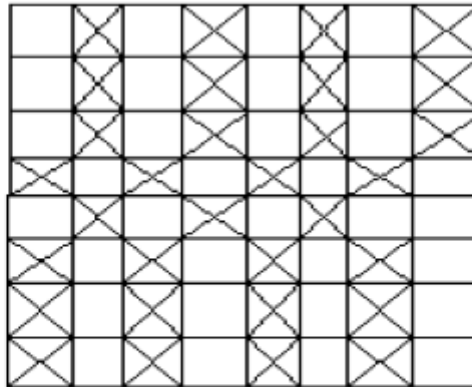


Fig 2: Warp rib

Warp rib weaves are made by running two or more picks together, as shown in Fig-3. This produces pronounced weft-way ribs, the surface of which consists of warp threads. The rib effect is emphasized by the use of a greater number of ends than picks and the insertion of coarser weft yarns. Consequently, the picks tend to lie rather straight with the ends bending round them, thus producing a warp rib structure in which the warp is mainly visible. The advantage of introducing two free weft yarns instead of one coarse yarn is that a broad rib is achieved without greatly increasing the thickness or weight of the cloth.

Since some confusion can arise in the terminology used, it is worthwhile drawing attention particularly to the fact that 'warp rib' weaves produce ribs running weft-way.

Rib effects result from extending the plain weave vertically. The weft is thicker causing the warp to bend and form a warp surface rib running from selvedge to selvedge.

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- Warp ribs are woven with a high warp sett, in which the ends cover the weft almost entirely.
- The ribs can be emphasized even more strongly by use of alternate slack and tight ends and thick and fine picks.

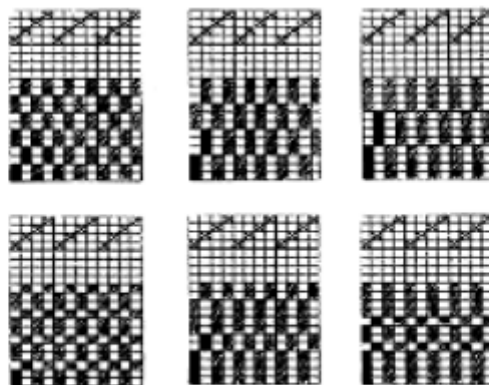


Fig 3: Warp Rib Weaves