

## COVERING MODELS WITH TISSUE

A good method for covering with tissue is as follows:

- Dope the entire structure that will be in contact with the tissue with full strength clear dope
- Sand Lightly with about 400 grit (the dope will raise the grain and cause "rough and scratchy" fuzz when it dries)
- I put on a second coat of 50/50 dope/thinner just for grins
- feel the structure for roughness and sand again if necessary
- Cut the tissue pieces just about 1/2" oversize all around
- cover the bottom first starting with the inboard panel. Use 50/50 on the bottom of the center rib and smoothing gently with your finger let the tissue adhere to the rib and let dry
- gently pull the tissue to the far dihedral rib and tack it in place **ONLY AT THE CENTER** of the rib
- Let dry. Then wet the leading and trailing edges with 50/50 right through the tissue as it lays on the structure and using your thumbs, gently stretch the tissue down and out as you progress to the dihedral rib. It is not necessary to dope the tissue down to each rib unless your wing has an undercambered airfoil. If you have an undercambered surface, using the thin edge of the brush, wet through the tissue and lightly rub with your finger to adhere the tissue to the bottom of the ribs (Note: Do not wet the whole L.E. or T.E. as you go, but only a short distance at a time to accommodate the undercamber attaching). Take them one at a time. If wrinkles appear, the local area can be re-wetted with 50/50 and lifted to re-attach the tissue or rub out the wrinkle gently with your finger.
- Trim the tissue about 1/8" excess at the ribs and dope the tissue down over the side of the rib to get a good attachment. This will help hold the tissue down and prevent "lifting" of the tissue when the adjacent panel is covered. Trim the trailing edge using 400 grit sandpaper on the sharp edge of the T.E. and it will cut right off. Do this gently. For the leading edge to leave about enough to wrap the tissue over 1/2 way around the nosing of the L.E.
- For the remaining panels, overlap the tissue a good 1/8" onto the existing covered panel and wait until the dope is dry and then use a similar technique to finish covering the panel.
- Cover the top of the wing in a similar fashion, inboard panel first starting at the wing center. Note that the tissue has to lay down to match the contour of the airfoil. It is not necessary to dope the tissue to the top of the ribs, only at the perimeter of the panel
- Trim the tissue in a similar fashion as you did when you covered the bottom, only this time, do not trim the trailing edge even. Trim it 1/8" or so oversize and using dope and your finger, overlap the underside of the T.E. and dope down the seam. Same with the L.E.
- When you have completed the whole wing, go over seams and such to recheck the attachments. I give the perimeter a coat of dope and rub it in with my finger.
- Let the whole thing DRY!
- Later, wet the tissue with water using a spray atomizer. Let it DRY. Sometimes this may take a day.
- Dope the entire wing using three coats of 50/50, allowing a good day between coats.. Try to restrain the structure at the leading and trailing edges so it dries straight and to prevent warping.
- If there are warps in the wing or you want to induce warps (wash-in or washout) this can be done later with an electric hair dryer or steam.