

Some Ideas for Applying Tissue

By Lee Hunt From the August issue of The Satellite, the newsletter of the San Valeers MAC, Ralph Prey, editor.

Japanese tissue remains the covering of choice for most builders when finishing Nostalgia rubber and gas models. Several articles have been published in the past few years and each has ideas of value. One of the best was written by master scale builder Fernando Ramos for the October '97 issue of Model Aviation. Two items of interest in his discussion of tissue application were his use of wet application and the use of Fab-Tac, an inexpensive alternative to Super Seam, a product highly touted by many for its superior bonding. My preference is for good old nitrate [dope], which is certainly far easier to loosen than diluted white glue, which tends to make tissue very soft to the point of dissolution if you re-work the paper too much. Besides, nitrate is cheap (well, sort of), available, and I'm addicted to the fumes, I suspect.

Rather than rehash the articles by Ramos, Bob Stalick, and others, I'd like to offer some suggestions that may be of use:

1. Since there is great variety in the dye lots used in tissue, it is important to purchase enough at one time to cover the entire model. I have four distinct shades of yellow, ranging from pale yellow to a yellow gold. It's not fun to discover you need a very specific shade of red, especially since you've already covered a large part of your wing. [And] white has more shades than you'd imagine.

2. Essential to good tissue application is having tissue in good condition -- not sun bleached, oil spotted or with a blemish that will be visible. I know about the "crumple" method of balling tissue up before application on light structures, but I am assuming most Nostalgia builders want tissue in nice, smooth condition. I take a batch of tissue, roll it carefully in newspaper (no bad results after years in such wrappers), tape the roll shut and label it. The rolls are put in a plastic storage box, hence no little critters, moisture, etc.

3. Years ago a model magazine article stated, "a good covering job hides a multitude of sins." Well, that's like saying a good paint job on a car will hide sloppy body work. The tip here is that the best tissue work will be on the best construction. At each point in construction, ask yourself if the fit is as perfect as you can make it; protruding spars and poorly sanded ribs will be accentuated, not hidden, by the covering. Take your time building, and many covering problems will be eliminated. (*Ed. The use of Dap "Fast N Final" lightweight spackling from Lowe's is as close to a model builder's "Bondo" as you can get, and can salvage some degree of slothfulness, see 7/8 2004 issue of this rag*)

4. It's unwise to mix dope and thinner from different manufacturers. Sometimes you get away with the relatively inexpensive products you buy at aircraft supply houses when you mix them with products from firms that make modeling chemicals, and sometimes you won't. It's heartbreaking to see many hours of work ruined by trying to save a few dollars. If you do run into trouble, don't hesitate to brush thinner on the doped surface and carefully swipe off the

blush, checking, etc. with Kleenex or a soft rag. Simply applying more dope over a problem seldom solves anything.

5. Try Ramos's wet covering. He places the tissue on a towel to soak up excess moisture, then places it over the compound to be covered. I like to put the tissue on dry, first attaching it (for a compound wing tip) at the center or polyhedral rib. Then letting it partially dry, then lightly spraying the entire panel, and carefully lifting the moistened tissue completely up with one hand and doping the leading and trailing edges and the tip. Then carefully allow the tissue to be placed on the structure and begin to gently work the tip to eliminate wrinkles. Should the dope begin to set before the panel is perfect, simply brush thinner through the tissue and re-wet the tissue as necessary so it is workable. If you don't get it right it's no big deal to do the panel again. One of the biggest problems I had as a kid of nine or ten was getting the tissue applied wrinkle free. To this day I love seeing a structure after water shrinking where there are no flaws.

6. Dihedral Joints: Normally, as you progress from one tip to the other, there are no problems in sizing the tissue to fit, since the excess is simply cut away. However the overlap at the dihedral joints is the exception. For years I simply eyeballed the curvature needed and cut and recut until there was minimal overlap. There is a better way! Beg, borrow or steal (not mine, please) a dressmaker's curved ruler. Mine is a Fairgate 102-C. It is a ruler with an increasing curve and is ideal for making exact tissue fits for sharply angled wing tips. You can easily cut a perfect 1/16" overlap with the exact curvature with this neat little tool.

7. Smoothing wrinkles: Still got a wrinkle? Even if the panel's tissue has been trimmed, you can often soak the adjoining attachment points with thinner, wet the area lightly and work the tissue until the wrinkle is gone. Still a flaw? Either re-cover if possible or consider what the legendary West Coast painter/stripping artist "Von Dutch" often used: a "hider." This is one of the few places that a finish can indeed hide a problem. The judicious placement of stars, stripes, lettering and other decorations may be the answer.

8. And finally, after the tissue is satisfactorily on and you have started to apply your finishing coats to seal the tissue and decorations, seriously consider spraying the final coats. It takes rare skill to brush on dope so that it is not blotchy or flawed. Brush-painted cars went out with the last century and I think spraying is the best way to achieve a superior finish for models. I hope there is at least an idea or two here to make what can be a challenging job into an easier one. For more detailed discussions of tissue application, see articles by both Bob Stalick and Fernando Ramos. (I believe they were both in Model Aviation but don't have the date of Stalick's article at hand.) Now that the tissue is on the model, I will try to pass along some ideas for tissue trim in a later article. Toshi Matsuda and Paul Gilliam perhaps got much ink in the modeling press based on the tissue trimming of their models as they did on the model's performance!