

Subject: Re: [c-a] Sanding Canard / Wing Cores

Date: Sun, 30 Jan 2000 23:37:37 -0500

From: Art Bianconi <british-biplane@juno.com>

To: taildragger@provide.net

CC: canard-aviators@canard.com

[The Canard Aviators's Mailing list]

The mullions in between windows on store fronts are made from extruded aluminum. Go to anyone who makes commercial store front windows and have him cut you one to length. If at all possible find one that has an I-beam cross section and sufficient wall thickness to provide some resistance to twisting.

3M makes spray on adhesives, one of which I found softens when heated with an industrial heat gun (a glorified hair dryer). I used strips of sandpaper that are sold in bulk quantities to body shops for a device called a "Long Stick". Long Sticks are about 18" to 24" long and about 4 " wide. All have handles on them and are designed to sand smooth large surfaces areas without creating depressions. Some are piston driven using compressed air and I'd recommend one highy for anyone contemplating sanding a composite aircraft. You'll need a big compressor however as these suckers blow through lots of air very quickly!

The paper that is cut to length for Long Sticks is ideal for your sanding board and you can, using 3M spray on adhesives, add enough of the precut strips of abrasive to your board to obtain the long sanding device you need and the grit that is best for the job.

You can also buy cloth backed abrasive rolls in damn near any grit you ask for in width ranging from ½" to 6" wide. The wider it is the more expensive it becomes exponentially! I didn't use them however, even though I have about a half dozen of these mounted on dispensers near my heavy machines (lathes and mills). The paper for Long Sticks was more than adequate.

This would be a good time to talk about lighting. A friend of mine was a sculptor and about 30 years ago taught me the in's and out's of "bass relief" (Pronounced Bar Relief). This artistic form depends on side lighting to create the impression of depth that really isn't there and is used extensively in the plaster decorations found on cielings in older homes.

While educating me on this, he taught me the valuiie of shutting down all the lights in the shop and then using one single light source to exaggerate surface imperfections. I immediately went home and inspected my Long-Ez winglet using the methods he taught me. I almost was in tears! What I had taken such care to sand and prime was not the beautiful surface I had been lead to believe. The side lighting showed every flaw in highlited detail. Ugh!

Since then I have found that side lighting is also a great way to find small things dropped on the shop floor. A simple straight pin, almost invisible to the eye in ambient light will stand out like a sore thunb if elluminated from the side. In fact, a thin piece of .030" safety wire will cast a shadow almost 2" long when sidelighted. Surface flaws are thus exaggerated too.

Inspecting a wing or strake on your composite bird with side lighting will show up surface flaws like you wouldn't believe. If you use this method on your cores before you glass them, you'll be able to correct in

From: Ken Miller <KenEZMiller@compuserve.com>

CC: "canard-aviators" <canard-aviators@canard.com>

Message text written by "Byers, Walt"

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Ken Miller

<www.long-ez.com>

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