



Texas City Wings



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Build for Better Performance (Part 2)

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By Phil Bayly

The Stabilizer, Elevator, and Rudder:

The previously described considerations for the wing's construction and stresses apply equally to the entire tail section except that the shorter linear dimensions do not have as much leverage to cause breakage. Therefore, lighter materials and designed construction should be used accordingly. Equally important, the tail section is critically important to the airplane's horizontal (nose to tail) center of gravity and must be kept as light as possible to prevent addition of nose weight for balance and performance degradation. Most tail sections are overbuilt (with heavier and too much wood) well beyond what is needed. The stabilizer and elevator intersecting spars must endure the continuing air loads and control system forces

and care must be taken to select strong wood for them. Proper wood selection is even more difficult for solid wood stabilizer-elevator construction to achieve light weight and the required strength. After that, you may go very light, including the entire rudder and fin. Examination of many crashed airplanes seldom finds damage in the tail section! So, judge accordingly.

Wood Selection:

Good wood selection is also an art and a science. The serious modeler will never rush down to the hobby shop to buy all the wood he needs to build the airplane he is ready to build. It's too late. The right selection of wood will likely not be there. The right approach is to always look over the wood every time you go to the hobby shop and buy the good stuff when you find it!

This way, you will have it available when you are ready to build. Your inventory of wood on hand is a quick measure of how light you will be able to build your airplanes. Kits are typically terrible for wood selection (and fit). Therefore, don't hesitate to replace the heavy parts accordingly. In fact, it is best to look the wood over before buying any kit to be sure you are getting what you expect. Otherwise, you may have only bought a set of plans. Your first indication of the weight your airplane will be is the "as is" weight of the kit in the box, right off the shelf. Too heavy will always be too heavy unless you plan to change out the kit's bad wood.

Wood grains or "cuts" is an article of its own, therefore, it won't be covered further here except to say that all woods of the same

Texas City Radio Club Meeting Minutes October—

These are the minutes for the Texas City Radio Control Club meeting for October 29, 2009. The meeting at the Nessler Recreation Center was called to order at 7:30pm by President Michael Grassmuck. A quorum was met with 16 members in attendance.

Visitors: Doug Lamp and Tim Holmes. Tim joined the membership at the meeting. Welcome aboard Tim.

Secretary's Report - David

Gatling: A motion was made, seconded, and passed to accept the August members meeting minutes as printed in the August Newsletter and amended to correct the building payment method.

Treasurer's Report – Ray

Saenz: The October beginning balance was \$9,473.61 and ending was \$9,828.12.

President's Report – Michael

Grassmuck: Mike stated that the hogs are back, this time located west of the south runway. A hog trap has been bated and placed at this location.

Mike gave the floor to Harvey Cappel for discussions of the new club building. Harvey

stated that the building drawings have been completed with the exception of the electrical which will be done by James Grassmuck. The building will be located at the metal grandstand location on a new concrete pad. The size will be 24ft x 50ft. When the package is complete, Harvey will present it to the Texas City mayor.

Vice President's Report – Randy

Brown: Randy reminded the membership of the Christmas party Tuesday, December 8th at Space Center Houston. Door prizes planned are: 1. a flight in Randy's plane from Hobby to Galveston, a limo to a restaurant, and a return flight to Hobby. 2. A L.A. racer with motor. 3. A Raptor F-22 RTF with radio. 4. 5-\$25- gift certificates for the ladies.

Randy stated that Mark Weiss after being hospitalized two weeks ago for a heart attack, had to return this past Friday in serious condition requiring a triple heart bypass. He is recovering at the Clear Lake Medical Center. Mike asked that the membership to keep Mark in their prayers.

Glen Pope stated that Braden Clough is in the Regency Rehab unit to help him with his back. Glen said that Braden is doing well and said they are keeping him very busy with exercises.

Event's Section Report – Mike Grassmuck said that the canceled Fun Fly scheduled this month will not be rescheduled this year do to the questionable weather the rest of the season.

Randy Brown commented that he, Kevin Furman, and Daniel McEachern gave demonstration flights at the NASA balloon fest. Randy said there was a lot of interest in the club and possibly some new members.

Safety Officer's Report – Butch

McEachern: Butch discussed the weight limit waiver (above 55 pounds) for model aircraft which are classified as experimental aircraft by the AMA. Butch gave the floor to Kevin Furman to discuss the process he went through to obtain this waiver for his Bill Hemper 55m YAK with a 3W275 engine, 140" wingspan, 37x13 prop, and weighing 63 pounds without fuel.

The process included a special AMA inspector going through an inspection consisting of four pages. He then received a temporary permit to test fly the aircraft testing his and the aircraft air worthiness. He then was tested for different maneuvers to complete his qualifications for his waiver. He will have to complete this process each year to continue the waiver. If he modifies any thing on or controlling the aircraft, he will

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Minutes continued

(Continued from page 2)

require completing the process again. The membership congratulated Kevin in his endeavor.

Pilot Instruction – Two new members are presently in flight instruction.

Field Marshall's Report – The maintenance shed lock required replacing due to the key being wedged in the lock due to door misalignment. The very wet weather must have caused the building to shift misaligning the door. Repairs are under consideration.

This is the last week of scheduled mowing until March of next year. Mowing until then will require volunteers on an as needed basis.

New Business Nominations were held with the following results:

President - Randy Brown

Vice President – Mark Weiss, James Grassmuck

Secretary – No nominees or volunteers. Your help is needed to fill this position to maintain communications within the club.

Treasury - Ray Saenz

Members at large – David Gatling, Kevin Furman, Don Roccaforte

Since there was no nominee for secretary, nominations will be open again at the November members meeting with election for this position being held at the Christmas party. The other director positions will be voted on at the November members meeting as scheduled.

Show and Tell none

Meeting was adjourned at 8:45pm.

Next members meeting will be at the Nessler Center at 7:30pm November 19th.

Build for Better Performance Continued from page 1

weight are not equal for all applications. The is A, B, and C grain with correct and incorrect use for each that goes well beyond its weight considerations alone, e.g. do not use C grain for spars or linear strength. Its strength is unidirectional and doesn't like to bend. For additional information, SIG provides an excellent information brochure on balsa grains and correct uses. Also, remember the earlier comments suggesting you visualize the stress each part will experience as you select its

type, size, density, and

grain of the wood for them.

Covering and finish: The covering and finish are great contributors to an airplane's weight and strength. The primary job of the finish is to provide the protection needed to prevent weakening from fuel penetration. To most, it significantly adds to the overall strength of the airplane, especially since they are at the surface where the maximum (tension and compression) stresses occur. If you are planning to go light on the covering and finish, additional strength will be required in the wood construction to survive. And, if you experience a tear in the wing's covering near the fuselage, without repair you may easily buckle the wing during a subsequent flight. A complete article on good covering and finishing techniques is in order for this complex subject. Maybe next time.

Conclusions: No airplane is crash proof. Still, the better airplanes incorporate the building techniques discussed herein so they will last longer, fly, and look better. If you still crash a lot from inexperience, this article can improve your survival rate and guide you toward building a better flying airplane. But just as important, examine every crash (not just your own) for the evidence of what broke and use your new knowledge to improve the weak spot(s) on the next airplane you build. Our progress only comes from doing it better the next time.

ON The Safe Side

Get “Cawtt” Up in Safety

I like to have a plan for an airplane for an event. That keeps me focused on the mission of completing and test flying the airplane in time to fly it at the scheduled event. If that is your style, you know that the closer the event comes the faster you work, the later at night you work, and maybe the more careless you become. I try to keep a notepad by the bench so that as I think of things I really need to do before I complete the airplane, I can write them down. For example, if I have test fitted the engine and mount so that I can cut out the cowl but I haven't tightened the engine mount bolts or the bolts attaching the engine to the mount, I write it on my list so that I will remember to check that before I take it flying. Maybe I hook up controls but don't have loctite on the machine screws holding the metal servo arms to servos that have metal output gears; I write it on the list so that I won't lose a control surface on a later flight. Keep a notepad near your work site so that while you are daydreaming at work (you all do that) you can write yourself reminders to take home and put on your list.

I have a checklist to go through before every takeoff. If you get in a habit like that, you can head off problems on the takeoff/flight. Since I was a soldier for 26 years, I am accus-

tomed to acronyms so my checklist is C.A.W.T.T. I tell my students “Don't get cawtt taking off without using your checklist. Go through the checklist before you take the main runway!”

Controls: Check control direction and all switch positions. With computer radios, you can have the wrong airplane or you may have changed something you didn't want to while changing a mix or throw between flights. Check for high/low rates, mix switches, or trim positions.

Antenna: I don't like to work on, start, or tune the engine with the antenna out so I keep it collapsed until I am ready to take the runway and I am safely behind the airplane and propeller. Make sure the antenna is completely pulled out and screwed in tightly.

Wind: Check the wind direction so you know in which direction to take off. If there is no wind, take up the same pattern other pilots in the air are using. Note the wind check is after the antenna-up check so that you can use the antenna flag as your wind sock.

Time: Start your timer or check your watch so that you will know when to land.

Traffic: Clear yourself to taxi with other pilots. We don't have air traffic controllers so you have to do it yourself. Ask loudly enough for all other pilots to hear if you can come out. Do not take the runway until all pilots at flight stations—or their spotters—clear you. So many times I hear people yell “coming out” then they add power and run out on the runway. Not only might that startle other pilots, distracting their attention from their own airplane but, maybe your airplane will die or flip over on the runway creating a hazard for others who might be at the end of their fuel. Besides, it is more courteous to ask. After you are cleared by the others, quickly take the runway and get in the air. They didn't clear you to sit in the middle of the runway and do more checks. That is why I say to go through the checklist before you take the runway.

If you get in the habit of doing a checklist like this before every single takeoff, not just the first one of the day, you will be safer. When I teach a new student, I draw his or her attention to a good pilot as he is preparing to take off. Hopefully, he or she will methodically go through a checklist and reinforce your teaching. But if not, point out the things you think were left out and the reasons they should be done.

I tell everyone there are 1,000 things that can kill a model airplane and I have 750 of them covered. Every time you have an accident or see and accident do a post mortem.

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Tips and Tricks

Good Cleaner

Here is a concoction I came up with. In an empty spray bottle, add a tablespoon of dish washing detergent, then fill the bottle halfway with regular rubbing alcohol, and top off with hot water. I have found this to work really well for cleaning the oil off of the wings and fuselage after a days worth of flying. Strong cleaner but will not hurt the covering or take the colors off.

AMA Charter #1075



New Life to Old Wire Landing Gear

Did you ever have a problem where your wire landing gear seems to get weaker and weaker? A possible solution is to remove the gear from the airframe and remove all the hardware from the gear wire (i.e. the wheels, collars, pants, etc). Preheat your kitchen oven to 450°F. Place the wire on a cookie sheet in the oven for one hour. Turn off the oven and toss the wire into cold water to cool it off quickly. What you have just done is to re-temper the music wire and you should have put new life into that old gear. Note that soldered joints should not be harmed as solder doesn't melt until about 700°F.
