

[**BOWSPRIT & CEMENT ON WOOD**](#)[**BARNACLES 1**](#)[**BOATBUILDING 11**](#)[**BUYING A BOAT 10**](#)[**CAULKING 36**](#)[**CLEANING TEAK 2**](#)[**CUTLASS BEARING & STUFFING BOX 2**](#)[**DECK & COACHROOF REPAIRS 25**](#)[**DESIGN 1**](#)[**DORY BUILDING 1**](#)[**DUCKS 1**](#)[**ELECTROLYSIS 2**](#)[**EPOXY PROBLEM 3**](#)[**Q**](#)[**F---P**](#)[**P---Z**](#)[**BOWSPRIT & CEMENT ON WOOD 1**](#)

Dear Mr. Wheeler,

I am finishing a beautifully Atkin Ingrid up here in Fort Bragg by Howard Makela. The boat has been built all according to the original plans, fir on oak double dipped galvanized nails lead keel inboard cement ballast etc.

I have two questions for which I wonder if you can help me with. Atkins designed the original sail

plan with a small 130 sq. ft jib carried on a 8 ft bowsprit.

This boat has been rigged with the more modern Blue Water Boatworks (Washington) sailplan

that was redesigned with a 300 sq. ft jib.

The original bowsprit ends up with a 3" diam. just before the Kranz iron. Granted most of the pressure on a bowsprit is vertical against the samson post. But if I put on the big jib with roller furling do you think that this size bowsprit (made from solid fir - not laminated) can handle the larger sail area.

Also do you think intermittent dripping from the stuffing box will rot out the planks covered by the interior cement? Said planks were heavily creosoted before the cement was poured.

Thank you for your advise.

Udo Nittner

Udo;

Nice project. The stuffing box drip, as long as it is salt water, will not hurt your planks', in fact salt water kills rot, it's freshwater you have to worry about. I am sure the creosote is good protection, but if you ever pour cement over planks again, put tar or plastic roof cement on the planks first. The loads on your bowsprit are displaced to the stem via the bobstay. If the loads are large, as in your case, the stay should be solid pipe or chain rather than wire. You don't want any play in the end of the sprit. You are better off with the larger sail plan, the Ingrid balances better with more foresail. Have a great time with your boat-----gary

Dear Gary,

Thank you for your kind advice. I feel better about the ballast presently getting wet. Next time I haul out I'll switch to a PSS shaftseal and this will stop it but in the meantime i feel reassured.

The bowsprit is rather heavily stayed, especially the bobstay, looks to me like three times the size of my heaviest shrouds. I was mostly worried about the end of the sprit being only 3" and it being solid fir instead of a laminated spar. Most bowsprits of the fiberglass Ingrid's that I have seen in the Bay Area had heavier laminated spars. Both whiskerstays and bobstay are being kept super taught. I am glad you agreed with the larger foresail before I am ordering my sails.

Thanks again.

Udo

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## **BARNACLES 1**

How do you remove barnacles from a fiberglass bottom without sanding ?

If you get to them as soon as the boat comes out of the water they are easy to scrape off. If they have time to dry you must soften them with a mild acid and then scrape. Urine works well and it's free-----g

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BOATBUILDING 11

Mr. Wheeler;

My name is Gary Pickering. I live in Florida, just north of Tampa. I am looking for a boat building school. The specifics I am looking for is a school where I can build my own boat (a live aboard) and receive instruction, and supervision, and at the end of the course, leave with my own boat. My problem in my search of most schools, is that the boats being built by most school are smaller than I wish, and they retain ownership of the project when the course is over. I was hoping you could help me in my search. Thanks for your time.

Gary Pickering

Gary:

Yes, what you seek would be ideal, but almost all boatbuilding schools rely partly on the money they get from the sale of the boats they build. You could seek out an independent boatbuilder you could pay to work with you or you could take a year or two at a boatbuilding school, learn the basics and then build your boat, or you could read a lot of books and choose a design less complicated to build. There is a boatbuilding school in Eastport Maine that possibly would consider your proposal. Go to www.macnaughtongroup.com and tell them what you want to do. They might be able to help. Good luck, you are on a noble pursuit-----gary

question: Hello Gary,

I am a recent college graduate interested in learning the trade of boatbuilding. I live in Rhode Island, and have worked on commercial fishing boats here. I have looked at boatbuilding schools, and would love to attend one, however my general lack of funds will probably prevent that (not to mention student loan debt). Are there any other avenues to learning the trade that you know of? i.e. that would be financially feasible for me? Thank you very much for your time,

Brian

Brian:

A most noble goal. There is a school here in Rockland Me, called the Apprenticeship, affiliated with the Atlantic Challenge USA Atlantic Challenge Homepage , which is quite reasonable, \$1,500 a year. It's a 2 year program. Other than that your best option is to work at a boat building company, start at the bottom and work your way up. Right now there are a lot of such jobs here in Maine, maybe so where you live as well. I learned working in boatyards and just doing it. There is also a school in Eastport Me. macnaughtongroup.com home page yacht design marine publishing liveaboard catalo . Good luck Brian, there is nothing more satisfying or challenging than working on boats. Feel free to ask more questions-----gary

question: Hello Gary -

Noticed you advised a wet dry roofing cement instead of 3M 5200 to caulk seams in old hull planks (carvel or clinker I assume). Would this be the correct way to go on new hull construction, too ? I'm interested in building a few river dories/driftboats with the students in my high school woodshop courses. Have access to plenty large amounts of softwood and quite a bit of hardwood. Am considering lapstrake western red cedar planking over white oak frames or possibly ash or fir. I have probably pulled thirty pages of material off the

internet concerning lapstrake planking but please advise if you have new construction tips.

thanks for your help, Chuck

Chuck:

Nice project and a great learning experience for the kids. The tar trick is primarily to keep old boats, that have been high and dry for a long time, from sinking. For new boat construction use 5200 if you want a glue like joint but if you don't use regular seam compound for any seams and use regular dolphonite bedding compound between surfaces. Check out www.woodenboat.com and boatbuid.com. Have fun with your project and send me some photos-----gary

Gary -

Thanks for your reply, do have several more questions !

- I assume both the regular seam compound and the dolphonite bedding compound are available thru marine sources onlyany equivalent home construction grades to be found in a typical local hardware outlet ?

- what's your advice on glued joints (with screws) vs. just the bedding compound and screws ?

For a pulling boat that will see some whitewater do the joints need to work and flex a bit or stay rock hard rigid ?

Sure appreciate your wise inputall this is going towards a scaled - down replica of an original 30' logging bateau from the 1930's thru 1960's used out here in the pac-norwest that looks suspiciously like some of the old dories I've been finding on the internet from the east coast !

I have been given copies of the const. plans which spec half - inch marine ply for the sides, but with the supply of good cedar and hackmatack/tamarack/larch from the mills around here, I sure would like to try planking of some type. Am drawn to lapstrake because it seems like a lot less finish sanding involved. I want to spend more time teaching the kids how to set up and use the machine tools in our shop (planers, jointers, shapers, et al) than how to sand with an orbital sander - which their already using at home anyway.

will send pictures if I can figure out how to load them into my cmpr. chuck

Chuck;

Glad to help. Any decent house grade caulk will work OK, maybe won't last as long but it will work. Flexible versus glued joints depend on the type of construction and the material used. Plywood doesn't swell and shrink like solid wood so boats made of it can be glued and screwed. Solid wood built boats need to be flexible so the wood can swell and contract without loosing watertightness. Lapstrake construction has a lot of advantages but less sanding is not one of them. The planks are riveted at the lap so the structure is quite rigid without a lot of inner structure like frames and stringers. However it is more time consuming and difficult to build. First I would pick the design, build the strongback upon which the boat or boats will be built over. Then I would build the first one out of plywood, glued and screwed and the seams taped with fiberglass, use it and see how it performs. If you like it build the second using carvel plank on frame with traditional caulking. Now with the third I would be ready to tackle a lapstrake one. Hope this clarifies rather than confuses. Keep asking if you have more questions-----gay

Gary;

I haven't built a boat yet, but have worked with wood. The link below contains a set of old "Science and Mechanics" magazine plans for a small "supposedly" ocean-worthy planked hull

sloop. I have been reading about new wood techniques such as Sheathed Strip, COLD-MOLDED or MULTI-DIAGONAL, and Stitch n Glue. In light of the new technology would it be "ridiculous" to try and build the planked boat described in the link below. Part of my attraction to these plans is nostalgic, but I have also truly hated my few brief encounters with epoxy and fiberglass. I end up with fingers stuck together, tools permanently bonded to the concrete floor. On the other hand I enjoy working with full grained wood and wood glue. If such a plan is still worth building, are any of these new techniques directly adaptable, and (in spite of my aversion) should they be utilized. I think that I have read that fiberglassing older plank hulls is a no-no, but would it be possible to epoxied cove and planking on a frame and plank hull versus the traditional cotton tamping and caulking. Also, could planks be epoxied to the frame rather than screwing or nailing them in place.

Here is the link for the plans in question: <http://www.svensons.com/boats/Gypsy/>

Any advice you can offer will be greatly appreciated and followed!

Dale Lynch
Austin, Texas

Dale;

Nice design and it looks like a good sailor. Plank on frame allows no variation in construction and is probably the most difficult for a novice. The construction technique results in a hull that is strong but at the same time flexible so it can move with the stress of sailing as well as the expansion and contraction of the solid wood. It is also easy to repair. You can't epoxy planks to frames or to each other because of the rigidity. You could strip plank using one inch locking glued strips edge nailed and eliminate most of the frames because this construction forms a solid hull not needing much of a skeleton for strength. This is an easier construction method than plank on frame but is a bitch to repair if needed. This particular design because of the hard chine is ideal for plywood construction, and this allows for cheaper, faster and easier construction especially for a first time builder. You wood only fiberglass the seams. You would have plenty of solid-wood shaping with the framing and deadwood and transom. Before you tackle such a project you might do well to build a pram dingy doing everything, including lofting, that would be necessary on the Gypsy. Feel free to ask more questions. You dream is a most worthy one, no reason in hell not to do it.-----gary

Here is another "vintage" plan I was considering, and it is already drafted in plywood. I have recently lofted and cut out a internally framed, plywood, pre-Lazer sailboard with accuracy. I haven't assembled it because my cheap direct drive table saw stripped out while trying to rip the angled "and kerfed" pieces meant to join the sides with the deck and hull bottom.

My questions on this other "vintage" sloop design are:

1. Would you include the "filler chine" shown in "Star-Lite_04.jpg" our could this be filled with bondo and fiberglassed over.
2. In regard to fiberglassing, would one merely fiberglass the outside of the chine seam or both sides of the joint?
3. The plan calls for gluing together multiple layers of thin plywood (2 3/8" plys or 3 1/4" plys) screwed and glued with resorcinal. Could a thicker one-sheet ply be used? If not, would glue the multiple plys with resorcinal, or would epoxy be better?
4. Should this plywood skin be completely staurated with epoxy as done with the stitch n glue boats?
5. If done correctly, would this boat (with its oak framing) be more sturdy than the quicker stitch n glue boats with minimal framing?

I appreciate the generosity Gary, and promise not to bombard you with endless streams of questions!

Thanks,
Dale Lynch
Austin, Texas

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Dale:

Questions are no problem. I'll answer in order;

1----- Yes, I suppose you could fill and fiberglass but that seems a lot more a pain in the but than a wood stringer.

2--- If you are fiberglassing for strength then do both sides with roving and matt but if you use mechanical fasteners and just fiberglass for watertightness then cloth just on the outside will do,

3-- Layering the plywood provides for overlapping joints and epoxy is better then resourcinol because it is more forgiving if there is less than perfect fits. Single thicker sheets can be used but they would have to be butted with large plywood butt blocks glued and screwed behind the joint.

4---- No, epoxy only penetrates very slightly into the first veneer of the ply, plus if moisture gets behind the epoxy you have perfect environment for rot. Painting is better. Only cover the whole surface if you are going to put fiberglass cloth over it.

5--- Yes

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question: I would love to build a Haven 12 1/2-Footer. I'm a Midwest, fresh water trailer sailor and I doubt that carvel planking like the original is the right thing. What planking system could I use that will last under my conditions?

Regards,
Eric Larson

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Eric;

Nice project and a beautiful boat. Yes, carvel planking is not the best when the boat is in and out of the water a great deal. I would recommend strip planking or lapstrake although strip is easier for the novice builder but lapstrake is prettier. Here's a site where you can get some information from those doing it Haven 12 1/2 Builders Site . Good luck and send pictures-----gary

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question: In one of your comments you suggested 3M 5200 might be used to advantage as luting between strips when building or repairing a cedar strip planked hull. Is that because there is some "give" in 3M 5200 and the hull can swell without cracking something? Is it a good compound to use between strips? I was planning on using a resorcinol glue because one source told me it has some minor gap filling qualities. I'm undecided.

A boat builder in New Oreleans told me a couple of years ago that the 3M 5200 was awful hard to clean up after using it to bulding some pirogues and plywoodboats but otherwise he loves it.

Jay Becker

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Jay;

Yes I did suggest using 5200 when applying a spline to an existing carvel planked seam because it is flexible but in strip construction you are actually forming a solid inflexible structure by gluing, epoxying, the strips together. You want no flexing here and a thick epoxy glue is what you want to use. And yes, 5200 is extremely messy and difficult to work with and its uses are just limited to forming a flexible bond that will never come apart which on a boat is not such a good thing because having pieces easily come apart is what makes a wood boat repairable. So, if you ever have a use for it, keep its limitations in mind.-----gary

question: I'm building a 21' "Handy Billy," as shown in WoodenBoat Mag. Mine is presently framed and beveled, ready for planking. Would like to use three layers of 1/4" red cedar. First two layers double diagonal, sealed with epoxy. Third (outer) layer longitudinal red cedar (essentially strip planking). Then epoxied and fiberglassed outside only. Is that a useful technique? Handy Billy is hard-chine, v-bottom. I'll likely include a small cuddy cabin, rather than the open launch profile. Thanks.... Jim G.

Jim;

Nice choice in a boat to build. Actually the process you describe is called cold molding, strip planking is when approximately 1 inch square strips are stacked, often tongue and groove, glued and edge nailed. Normally these 2 building methods are used with soft chine boats and ones with multiple compound curves but not usually used with hard chine boats. These designs are carvel planked or done with plywood. For home building, plywood is the preferred method both for strength and ease of construction plus it is compatible with fiberglass. The cold molding method as compared to plywood, although also fiberglass compatible, is much more labor intensive and expensive, plus if you ever have to repair damage to the hull, it is hell. Please ask more as needed.

Good luck-----gary

question: Hi,

I am building a spray 28 steel, and I am wondering what is the best way to join sheets of ply together to form a bulkhead. I shall have to join and glue these sections of ply inside the boat as the cabin opening will not be large enough to allow a full width bulkhead. I will be using 19 mm ply, can I scarf join each section together, or is it better to lap, butt or otherwise.

on 19 mm ply what would you suggest for the size of the scarf, or other type of joint and what type of glue.

Regards

John

John;

Part of the issue with bulk head construction is how much structural support they need to provide for the hull. With a steel boat I doubt if they supply a great deal of structural support, so how you construct them may depend more on convenience than strength. If I was after strength I would epoxy glue two 9 mm sheets of ply

staggering the joints by a couple of feet and have at least a one foot overlap at the joints. You can screw the 2 sheets together while the glue sets and either leave them in or remove them. If you are to use a single 19 mm sheet I would butt the joints with butterfly keys and fiberglass the joints with at least 6 in fiberglass tape on both sides. Scarfing ply is very difficult and the scarfing ratio should be 12 to 1 meaning for 19 mm ply you need about a 12 inch scarf.. Check the drawing for a visual-----hope this helps. Good luck, ask more if needed-----g

Hi ,

thanks for the information on bulkheads, this has helped a lot.

If you don't mind I have another inquiry (this time concerning fitting port lights /windows to the steel cabin sides. The boat has been sand blasted and fully painted with epoxy paints.) I have cut five openings each side of the cabin each 475mm by 225mm, these are for the portholes.

I will be using smoked uv resistant laminated glass . the glass thickness is 10mm thick.

I am going to use sixaflex to set the glass on to the side of the cabin.

The glass will be 25mm greater than the cabin cut-out to allow for enough sikaflex to ensure proper attachment(the sixaflex is all that will be attaching the glass to the side of the cabin.

Do you think I have allowed enough in the 25mm overlap?, as the glass will have a bit of weight at that thickness.

I shall be supporting each piece until the sixaflex has cured then removing the temporary supports. Each piece of glass shall rely solely on the adhesion of the sikaflex .

Also could I go down in the glass thickness and still have adequate strength.

I have thought of using plexiglass and attaching in the same manner as above

but I am concerned about the ease of scratching and also the eventual discolouring over time from UV

Regards

JOHN

John;

If you are going to just rely on an adhesive to hold the glass to the hull, I would do a little research and find out what would be the best adhesive on glass and steel. I know 3m 5200 is a better adhesive than Sikaflex but there may be others as well. I would tend to want to secure the glass mechanically as well, possibly by through bolting a frame that clamps the glass plus it looks nice if done in mahogany or teak. When you are taking big breaking seas over your glass ports, you'll want all the security you can get. Also I would not scrimp on the glass thickness. As I think about it, I would be remiss not to emphasize the importance of sandwiching the glass port in a bolted on frame structure, if for no other reason, than to trust any adhesive to bond two such dissimilar materials as glass and steel is foolhardy, and your life could depend on it.-----g

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**BUYING A WOOD BOAT 10**

Hi Gary,

I am new to the wood sailboat scene so I apologize for my ignorance. A swing keel 1939 36ft wood sailboat sloop is the what I have been thinking and preoccupied about. The designer is Frederick Geiger, and builder was Morris Johnson of Bay Head N.J. The boat has a diesel Water Mota Sea Panther engine.

At this point I am asking is what are the critical elements I need to look at in inspecting this boat.

General outside inspection:

1. The wood above the waterline appears fine. There appears to be some rust mark. It needs repainting.
2. The mast looks solid (made of wood I don't know what type) and tall with rigging in place (goose neck, forward and aft stringers?, runner, side rigs, spreaders).
3. I walked on the deck and it appears solid. Some areas have cracks. I am not sure if the floor was covered with fiberglass?
4. The original port holes look fine. There are areas where paint is peeling. But floor does not seem to flex.
5. The hatch rim s look fine, some loss of varnish.
6. The stanchion feel solid, the bow pulpit moves a bit.

Cockpit

1. I looked below the cockpit into the back transom, it looks dry and wood appears clean and solid.
2. The engine looks dirty, greasy and rusty at some parts. The mounts and wood area around looks solid.
3. The area around where the shaft goes out of the boat looks old. No water is dripping down. Looks that shaft has not been rotated for awhile.

Inside

1. The inside definitely needs work. The cabinets were moved around, and some trims were taken out.
2. The floor planking was removed.
3. I am trying to examine the lower hull for structural integrity. There is some water but it appears to be coming from the outside going inside and down the mast and crack above.
4. There are spars? going from each side to the center. There is a center keel that appears to be darker wood than the other?
5. Some big fat bolts and nuts around this beam or through it?
6. The bilge section toward the back underneath the engine looks fine with some water.
7. The mast goes down to the hull. It appears solid.
8. The forward section V berth looks dry and fine.
9. The toilet has a pump.
- 10 I tried examining the water intakes and the valves. I did not try to turn them incase water started coming in and I couldn't stop it

afterwards.

11. Side of the wall appear dry and solid.

12. I am not sure how the swing keel works. But there is a center table.

The leaves fall side words. A cable from above deck comes down a brass tube?

Engine

1. The engine has been sitting around for 3 years. The marina said it was winterized.

2. There appeared to be some water in the oil?

3. The starter is dead so they are trying to get another.

I'll have to see if they can get it to start.

The boat was lifted up last year for cleaning and the marina people said the hull was fine, and paint was also fine.

Anyway please comment freely about what I have said, especially about critical wood areas of the boat. I am concerned for instance about the back section where the shaft comes in. I am afraid the wood might pop out and water comes in?

If you can answer before Friday would be great since I have to make a decision by then.

Thanks.

J.B

JB

Certainly sounds like an interesting boat. I would guess it has a centerboard rather than a swing keel for they are rarely found on wooden boats. My best advice is to get a surveyor to check the boat out or at least pay a local boat carpenter to go over the boat. You say you are a wooden boat novice but you have done a commendable inspection of the boat. From what you report, the boat sounds fine and depending on the price may be a good deal. If you can't do what I suggest above, you should acquire a small wood mallet and tap on any areas of the boat that look suspicious. If the wood is sound you will here a high pitched sound, if there is a problem such as rot or delaminated plywood you will here a non resonating thud. Remember fresh water causes rot not salt water so the bottom of the boat is probably sound. You should also be aware that buying a wooden boat changes your life forever. You will fall in love but wood boats are demanding partners and you must enjoy working on them as much as sailing them. Got to [www.google.com](http://www.google.com) and type in Geiger sloop.

Good luck and I will be glad to answer any specific questions.-----gary

Ps. On the inside keelson the big fat bolts are probably keel bolts, tap them with a metal hammer and hopefully they will ring rather than thud.

Gary,

Thanks so much for your lightning reply (much appreciated!).

With your experience. What price for this boat is Not a good deal (being conservative and assuming worst case scenario)? Above \$10k?, or \$5k?

Is \$3k a good deal?

Thanks!

JB

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JB

If you can buy a sound professionally built 36ft wood sailboat less than 50 yrs old for under 10 thousand you have a good deal even if it needs some work. Over 10 you would have to consider how much more you would have to spend to make it A-1.

Of course a lot has to do with what you plan to do with the boat, there is a big difference in demand on the boat between a little coastal cruising versus deep water extensive cruising. But for \$10,000 or under you can make a mistake and probably recoup your money. If you can get it for 3,000 it's worth it even if you would use it as a front yard decoration.-----gary

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question: Hey Gary,

I'm considering purchasing an 1965 H-28 with glass over strip planked cedar. The deck and hull have been glassed over. There is some soft spots on the deck. How does one go about fixing it with the glass over wood? Can you remove glass from wood entirely? Also, can you recommend a boat carpenter for the east coast of Florida?

Thanks so much for your time,  
Amy

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AMY;

I am jealous, I've been looking for an H-28 myself. Glass over strip planking is pretty standard and usually causes little problem but glass over wood decks can be a real pain in the butt. When fresh water sneaks between the wood and glass you get rot which manifests itself as soft spots in the deck. The only way to fix such problems is to determine the extent of the rot and cut it out and replace with new wood. To remove glass from good wood you must grind it off, a horrible job and not necessary if there is a good bond. I am not knowledgeable about boat carpenters in the Florida area but I do know you have to be careful who you hire. Hang out at a local boatyard and see who others have used and are pleased with. I hope you get the boat, it is one of Herrshoffs best designs, a true big little boat. Hope this helped, feel free to ask more-----gary

question: Greetings,

I recently beat up my keel on some rocks. Upon inspection I found that the bow of the boat, if not all of the boat, is filled with foam and it is wet all the way up to the floorboards. The fiberglass repair is easy enough, but I believe I need to remove the foam to avoid rotting. Do I need to fill the boat up with new foam when I'm done? What is the purpose of foam in the bottom? What do you recommend if I must replace the foam? Also, we'll have to cut out the floor to get to the foam - any recommendations on waterproofing it once we put new wood down?

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Hi

I am not sure exactly what wood you are replacing, if it is part of the hull it should be sealed with penetrating epoxy and fiberglassed in place. The foam is mainly a space filler and provides some minimal support. You can get water proof blue board foam at your local home building supplier or you can get a 2 part expanding foam which is tricky to use. Basically the name of the game is to keep the fresh water out so rot does not get

into the wood. Ask more as needed----- be as specific as possible-----good luck-----gary

Greetings Gary,

Thanks for much for your speedy reply. I have a keel with two angular breeches caused by a rock. It's a 1971 SeaSwirl boat that's in good condition otherwise. When I drilled through the floorboards above the hole in the keel I found a good solid fiberglass floor with plywood underneath and then wet foam. The wood was totally soaked. I figure the entire boat, if not separated by stringers, is likely soaked. So, I'm thinking I need to cut out floorboard completely, pull all the foam, grind down the edges, make sure the stringers are ok and rebuild if not, patch the keel with fiberglass from the inside as well as the outside, fill it with foam, treat new plywood with acetone and resin and reseal and glass it over, install the carpet and do touch up paint and I'm done...Does that sound like what I need to do for such a job? If I don't pull it all out I'm concerned that it will rot.

What's tricky about the 2 part foam - can't you just cut away what you don't need if it comes up too much?

Please tell me more about the epoxy as well. Right now I have fiberglass materials with a resin mix and catalyst but don't know anything about the epoxy.

Thank You!

Ken

Ken:

Your procedure sounds right on. The resin you have is probably polyester which is fine and is no doubt what was used throughout the boat. Epoxy is much more expensive. The penetrating epoxy [ see [www.rotdoctor.com](http://www.rotdoctor.com)] I refer to is very thin and saturates solid wood much more than polyester but is also compatible with polyester so you can coat the wood with penetrating epoxy, let it dry, then glass over it with polyester. If all you are using is plywood, the penetrating epoxy is not necessary, neither is the acetone which is mainly used on oily woods before glassing. The 2 part foam is fine unless you are putting it in a confined space where its excess expansion would cause a problem. Make sure it is a closed cell foam so it won't absorb water. Plus, find out where the water came from in the first place-----gary

question: Mr. Wheeler,

I am a woodworker, but have no experience with wooden boats.

I hope to retire soon to Florida and have been told about a circa 1967 lapstrake, mahogany hull 34' cruiser made by Ulrichsen.

It is being used as liveaboard in a slip.

I am told by it's owner the hull is sound but has some broken ribs due to yearly dry storage and needs work around the port garboard area to seal up a leak before embarking on a cruise.

Rather than buying a home, I thought this could be an inexpensive way to get start out. The price of the boat seems very, very low. Slip rent is \$325.00 per month.

Could I be getting in over my head?

Thank for any advice,

Mike

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Mike;

Sounds like you are in for some changes, good ones. The first thing to find out is when the boat was last hauled and had new bottom paint. A wood boat especially in Florida must be protected from the wood eating toredo worms which means good antifouling paint applied yearly. If it hasn't been painted recently you must haul it and check the bottom for worm damage. Also, equally important is that the underwater sacrificial zincs have been kept in good shape for they protect the fastenings below the waterline from electrolysis. If it has been regularly painted and zincs maintained any structural problems you will have no problem learning how to fix. Florida's climate is hell on wood boats, heat and moisture, rots friends. You must have good air circulation to keep the rot spores from developing.--- Hope this helps and I hope you get the boat and start enjoying life on the water. Feel free to ask more-----g

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question: hallo gary.

i am an young guy trafelling in south-america,and i found a 45 feet

philip rhodes sloop for an preety good price,but there is a lot to work on her.as it is my dream since years to own my own sailboat,

i realy think about buying her.so i have a bit an idea of wooden boats

but actually i don't know nothing about double planked hulls

(honduras mahagony,silicon brass screwd)

so my question is what i specialy have to look for at inspecting an double planked hulland where the rot starts in there,another question is as she is moored in south-america since some years with an prety old paintjob underneath,

what is the easyest and best way to find out whether she got worms?

thanks a lot.andreas

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Andreas:

Sounds like an interesting boat but if it needs considerable work beyond cosmetics you must decide how much time and \$ your willing to put in. First you need someone who knows wooden boats to look at her, preferably out of the water, and give you an overall analysis of her condition. I can't tell you how to do this but I will say the best way to expose wood rot and worm damage is to tap the suspect area with a hammer and if you get a solid sound good enough, but if you get a hollow or dead thud sound you have a problem. Toredoworms usually bore small holes in the planks or dead wood and eat out the inner core without ever returning to the surface of the wood, that's why sounding is the only way to tell if there is damage. Good luck but remember the definition of a boat can be " a hole in the water into which you throw money"---gary

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question: How can I check for ship worm in a wooden hull the boat is in the water unfortunately in the Med. and i dont know if there are any facilities for lifting out of water. The owner say's hull is in good condition but I would like to check somehow.

Regards Dougie

Dougie;

Usually there is little external indication that Toredos worms have entered the hull for often the entry point is pinhole in size. Once entering the wood the worm travels with the grain eating out a sizable tunnel and growing all the time which can virtually hollow out the timber with no indication of this on the woods surface. The only way I know of testing for worm damage is to sound the hull with a hammer listening for the hollow sound given off by the damaged wood. Unfortunately this sounding must be done with the outside of the hull exposed which means either hauling the vessel or careening it at a low tide, a problem in the Med where tides are slight. Personally I would not purchase a wood hull that has been in worm inhabited water without thoroughly inspecting the hull. Good luck-----gary

question: Hello Gary,

We are looking into buying a wood boat. We are new to wooden boats and are unsure of the maintenance. Everyone always says that there is so much more on wooden than anyother type. Please educate us on a good maintenance schedule. The boat has been replanked but not yet caulked or painted. Once these are done what would be required to keep it in good condition? We appreciate such a great resource for information on wooden boats. Thanks, John & Sarah Hale

Sarah & John;

Actually, a wooden boat in good condition doesn't require a lot more maintenance than other types. Besides hull topside painting every few years and depending on the amount of bright work to be varnished, the cost and time involved is pretty similar. The difference arises when maintenance is not kept up. A fiberglass boat can sit for years uncovered exposed to the weather and basically not suffer any real damage. A wood boat, however, will deteriorate very quickly if the wood is left unprotected and exposed to fresh water which harbors the rot spores. So, in owning a wood boat you make a commitment to keep it maintained and if you can't, sell it before deterioration sets in. The little extra work involved is well worth it, the feel of a wood boat in the water is so incredibly superior to other materials that the attention required merely adds to the pleasure. It is important that you enjoy the maintenance work or have the funds to pay others to do it for, if not, it is only a matter of time before the maintenance slides and great effort and money will be required to bring the boat back to pristine condition. One great quality of wooden boats is that they are made to be fixed because it is understood that wood has a certain lifespan and overtime much of the wood on a old wood boat will have been replaced. Also, finally, you should know, there is a wooden boat hell for those that let their vessels deteriorate to the point of no return. If you decide to take the wooden boat plunge feel free to ask as many questions as you need, there is much to learn, although there is one simple dictum and truth----maintain and repair a wooden boat using the same materials and traditional methods that were used to build it in the first place-----gary

Gary,

We are very grateful and impressed with the super fast and wonderful advice. Thank you! Your web site deserves special honors. It is very informative and will serve as a major reference for us. We appreciate your words of encouragement. We were feeling like this boat was right for us but then came all the warnings and scary stories. We forget if we mentioned the boat we are looking into. It is a 75' Herreschoff. We are flying out in a week to check it out. It has been replanked but needs to be caulked and painted. We are very adventures, hard working and above average intelligence. Our desire is to do the work ourselves. One to save money and two for the experience and knowledge. In your opinion, should a job this big be attempted by inexperienced people? Is it something that can be completely fouled up easily? What would be the best book to start with in preparing for such a project. Have you written a book? If so what is the name of it.

Again, We are grateful for you advice and will most assuredly be back in touch with you for more of your expertise and advice.

Ever so grateful,  
John & Sarah Hale

Sarah;

Thanks for the compliments on the site, no book so far. Your potential future boat sounds great, what model Herreschoff is it? One of the most important tasks in a rebuild of carvel planked wooden boat is the seam caulking with cotton and or oakum. This should be done by an experienced caulker for if it is done too loose the boat works too much and leaks, too tight and the planks will buckle because they can't swell. If you can't afford a pro to do it all, at least hire one to teach you what and what not to do. Also, since it sounds like wooden boats are new to you, find an experienced hand to look over the boat with you to verify its condition. I don't know your intentions with such a boat, but a 75 footer with 2 people is a bit much to handle, even a Herreschoff. Where is it located? Let me know how it goes.-----gary

question: Gary,  
I'm considering the purchase of a 1970 42' Pacemaker Sport Fisher. She's been out of the water now for approx. 1+ year. I'm planning on totally re-caulking the bottom and repainting the bottom. After what I've read in your replies, I will leave the cotton alone. I have several questions: I'm pretty careful about what I do so, how long should she take on water after I launch her, and how much should she leak. I'm a little nervous about launching her, cliombing onboard, looking in the bilge and screaming "oh, my God get her back out quick". As a side note this is quite an adventure I'm undertaking I live in Achorage Alaska and the boat is on the East coast. So, I will work on her all winter 'til spring, cruise her down through the Panama Canal up the West coast, through the Inside Passage , across the Gulf Of alaska, and finally home to Seward. She'll work as a salmon charter boat from there. Lots of work but, lots of fun, too...great site great knowledge - Thanks J.P.

JP

Thanks for the compliment on the site. Pacemaker's are good boats and even one out of the water for 14 years should be OK if it was properly supported and protected from fresh water. Assuming this is the case, your recaulk plan is correct although I would find a way to swell the planks a bit before you apply new seam compound. Stapling cloths or foam to the bottom and keeping it damp for a couple weeks would help immensely. Also, although I think your trip plans are noble and adventurous, the practical aspects of fuel costs and wear and tear on the boat may outweigh these and lead you more to the practical alternative of using the travel money to have the boat trucked or shipped by ship to your home and work on it there, or look for a similar vessel closer to home. But sometimes Dreams are more important than practical sense. To your point, when you launch the boat have a good 110 submersible pump available for backup, also have a bag of

sawdust which can be dumped into the water and swirled about with paddle so it sinks and temporarily clogs the leaky seams and the leaks should halve themselves every 24 hrs and completely stop in 5-7 days. Leaks beyond that time would have to be attended to. Good luck-----gary

question: Gary,

Well, I'm back again with more questions. I had the 1970 42' Pacemaker Sportfisher looked at by a marine surveyor. His report goes like this: there are some cracked planks, the transom has some rot and probably needs some planks replaced, the skeg has partially pulled away from the keel (he said he'd never seen that before), she has leaked diesel into the hold and right out the bottom onto the ground, (so you can tell the dryness of the hull), he also said the boatyard where she is stored had to move the braces due to them starting to "crush". Is this boat a loss or, if I can get it cheap enough could it be fixed in say 6 mos. of labor? I know this is a hard guess on your part. Thanks again for your time and knowledge... J.P.

J.P.

The bottom line is that a wooden boat is built so it can be fixed, whether to take on such a project depends on ones skill , ones wallet and ones passion for a particular boat. This boat has problems but certainly sounds fixable in a reasonable amount of time. Many of the problems are do to shrinkage from the boat drying out. Cracks in planks caused by shrinkage usually crack along the grain and will swell closed when wetted out. This applies to the separated skeg as well. The problem from the boat stands usually will correct itself once the boat is back in the water unless the keel itself has been badly bent or broken. Most older power boats have spot rot around the transom because fresh water finds its way from the deck behind the transom planks and into the corners where the framing is and causes rot. All very fixable. The real expensive problem areas can lie in the shaft logs , engine beds, tanks and engines but fortunately, from what you said, your surveyor found no problems there. Doing the work needed will take a commitment of time and money but it is important not to begin unless you can finish, boatyards are full of half finished projects started with dreams and good intentions but failed because "shit happens". Hope this helps but I know better than most that when it comes to buying an older wooden boat, practicality and common sense often go by the wayside. Let me know how it plays out----gary

question: gary, I am a first time sailboat buyer, and carpenter. I have looked at a Blanchard 33 sloop. Ten were built in the '40's. Stem and ribs are oak, keel and deadwood fir, planking red cedar with plywood decks. The fastenings are Everdur, whatever that is. This boat seems largely original. The motor, a volvo D2 is out of her. She's in the water here in the Pacific Northwest. Here's my amatuer survey. Mast totally rebuilt in the last five years. Hull watertight (in the slip). Some rust spots from planking fasteners above the waterline. The original plywood deck had 3/8 ply attached over it, then the whole deck and coachroof was epoxied and painted. The sails come with it, they sound intact but tired. The head is a rebuilt raritan, there is a diesel stove the owner said was of quality, but I can't remember the brand. No electronics. There is no obvious damage or leaking anywhere, the current owner has her hauled and painted every four years, and she is due now for this work. The cockpit is huge, and hence not as much room below as one would expect from 33'. The price is around 5k. I can feel the draw of a wood boat, it's sucking me in. It sounds like a deal. If it passed a professional survey, what do you think? Ed

Ed;

Even just with your own "unprofessional survey" the boat sounds worth the money, although you might look closer at the deck and check more thoroughly what the 3/8 ply is covering over. But since it is your first wood boat and you have carpentry skills and all wooden boats are made to fix, you're in a pretty good place to have such a first boat. Actually if one of your goals is to learn wooden boat restoration, this one may be too good. Probably the most important deciding factor should be whether or not the design fits what you want to do with the boat.

If it's for day sailing and short cruises, fine enough, but if you want it for longer trips and off shore work , look elsewhere, a big cockpit is great for inshore sailing with friends, but is an accident waiting to happen off shore. Good luck, owning a wooden boat and being a good steward to it, is one of life's true joys. Ask more as needed----gary

question: Gary, I really appreciate your prompt and informative response regarding the Blanchard 33 I'm looking at. I went back and had another look over the boat. I noticed some water on one of the bunks and concluded that it must have come from a crack in the epoxy now covering the ply deck. What repair would this entail? The lower layer of ply decking is totally exposed in the cabin and I could find no rot. Also, is there any way to determine the shape of the plank fasteners without pulling one? Maybe I'm looking for something that would indicate their condition. I don't think the owner would like me pulling one. Would a surveyor be able to determine this? I've enclosed a drawing of the Blanchard 33. My assessment of the cockpit being huge was just a novice speculating. If you could take a look and see if she would be, by design, fit for offshore sailing. Thanks again for being so generous with your knowledge, if it weren't for this site I would be feeling alone!

g in the dark. Ed -whoops, the drawing didn't paste. maybe these specs could tell you something.

## Classic Day Sails

As far as we know, nine hulls were built on the Blanchard 33 mold. A tenth may have been produced as a yawl. Currently five of these lovely sloops are known to exist today. The whereabouts of one is unknown. The other three are Vagabond, Seawind and Varuna. Two have reportedly been sailed to Hawaii. And one of these was reported as a derelict in a yard in Hilo. The last one, hull number five, is perhaps best known for her travels up and down Puget Sound under the meticulous ownership, and steady hand, of her owner Ward Fay.

Aura was first owned by a well off family who hailed from Arizona. They decided they wanted to go yachting and made arrangements with Norm Blanchard for one of the 33 foot sloops which they named Aira. They owned her for five years, sailing her in the summer, and returning her to Norm Blanchard during the 'off season.' This family then sold Aira to Norm Blanchard (who mortgaged his house for her) with the stipulation that he change her name, which he did. Now named the Aura she was owned and enjoyed by Norm from 1952 to 1977. He then reluctantly sold her.

In the intervening years she has had a series of good owners who have kept her in great condition. She has had new floors, frames and planking around the mast step. She has also had minor changes to her cockpit, with fuel tanks located below her main cabin settees.

Waterline length

24'

Length on deck

33' 3"

Length overall

36'

Beam

8' 9"

Draft

5'

Ballast 4,150 lbs

Displacement 10,300 lbs

Working sail area 500 square feet

Engine Fresh-water cooled Atomic 4 (gas)

'Yachting' Magazine, April 1949

The Blanchard 33, from the Blanchard Boat Co., from designs by William Garden is a new stock one-design auxiliary cruising sloop, the first few of which have proved to be smart and able cruising boats. Requirements were quarters for four, with six feet of headroom, enclosed toilet, coal range in the galley, and a boat that could be built economically in quantity. Stem and ribs are oak; keel and deadwood, fir; planking, red cedar; decks, plywood; trim, Honduras mahogany; and fastenings, Everdur. She has a 4150-lb iron keel.

No problem with the questions, I enjoy sharing my experience from messing about with wooden boats. I went to the same site you did (<http://www.classicdaysails.com/Pages/TheAura.html>) and by her lines she certainly appears to be an adequate coastal cruiser and there would be little to fear in a seaway. Make sure there are cockpit drains. You can just fill the ply crack with an epoxy paste but the wet bunk could be from condensation rather than a leak, which leads to an important point, the most significant factor in the survival of a wood boat over time is adequate fresh air circulation throughout the inside of the hull.

The best way to check the condition of any wooded area on a boat is by sounding it, by tapping the wood with the handle of a screwdriver . A sharp solid sound indicates healthy wood, a soft or dead sound indicates problems, rot, fastening failure, ply separation or electrolysis damage. This is how a surveyor would test the soundness of the hull. Also on this boat having an iron keel and probably steel keel bolts, it is important to sound out these bolts as well to get an indication of there condition. Also, Everdur fastening are pretty resistant to deterioration but can be weakened by electrolysis below the waterline. Considering your newness to the wooden boat scene, it would be worth the money to have a survey done so you can have some definitive answers to your concerns. From what I see, its a good deal-----g

question: I keep asking this question to myself, "Why not a Ketch?" I love the design but don't see many on the Great Lakes. Can you give me a why or why not a ketch would be a great boat for the Great lakes? The boat I have in mind is a Person 365. Thank you. Lorenzo

P.S. boating betty is my wife!

Lorenzo & Betty

I am with you. I have owned boats with a variety of rigs and the ketch is my favorite. You probably don't see many on the lakes because it is mainly a cruising rig, having the advantage of being easy to single hand and having many sail combinations to handle a variety of weather and sea conditions. But It can not sail as close to the wind as a sloop, has a mast in front of the steering station, is a bit slower and for those reasons is not the first choice of day sailors or weekend cruisers. Personally I like their looks and all the lines and rigging to mess with. Sail boat choice is very personal, go with your gut-----gary

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Thank you Gary for your insight very appreciative. I met today with our broker to take another look at a Person 365. She is in great shape, and we will be bringing an offer to the table soon. Once again, thanks Lorenzo

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CAULKING 35

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question: I just purchased an unusual wooden boat(circa 1907). She is a double ended gaff-rigged pinky cutter. Thirty-seven feet overall. Oregon cedar over oak for her hull, bronze fastened with bronze rigging wire. She has a few weeping planks. I throw some rock salt into the bilge on occasion to keep her salty. Question #1: Can I use roofing tar to temporarily stop the weeping while she is in the water? She came with a large tin of what I understand to be Stockholm Tar. Question #2: Is this used just for fragrance (delightful) or is this also suitable for drying her tears?

.
Delightful boat, you are a lucky man. Unusual to have bronze rigging wire because it stretches. Yes, you can use the wet dry roof patch tar to stop up weepy seams, and yes, that good smelling stuff is for seams as well, but usually just deck seams. Also, an old trick to stop weepy planks while not underway is to swirl some saw dust in the water. The saw dust will clog the leaks but will wash out once the boat is underway again.-----gary

Hi Gary,

Okay, I am finally caulking my wood planked fishing boat, using cotton and then a polysulfide, boat life product.

How the heck do they get such nice finished seams.

I apply it in the groove from the caulking gun with a thin tip.. I then use a stiff putty knife and go along the seam with pressure to push the caulking into the seam.

But I end up with it all over as wide as the 1 1/2" putty knife.

How do I get it in just the seam?

Should I follow along with a rag with paint thinner or acetone or something?

Thanks for your help.

Kevin Rea

Kevin:

How did your bulwarks turn out? With your seams you have to tape both sides of the seam, put in the goo, push it in and smooth it with a wet[water] finger, this will indent it slightly so when the plank swells it will be flush more or less. Than pull the tape while the goo is still wet. Pull the tape back on itself like< . For future reference, polysulfides will work OK as a seam compound if you have not painted the seams first, but because it sticks to the wood like glue, it is a bear to get out. Regular interlux seam compound, white for topsides, brown for the bottom is best but when using it you must paint the seam so the oils don't leach into the wood and dry it out prematurely.-----good luck

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Hi,

I was reading a message post from you from about a year ago, and you said that using a polysulfide for caulking a carvel seam is not the best way to go because it is so hard to remove at a future date.

What should I use instead?

Thanks,
kevin rea

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Kevin:

Nice site and nice boat. Congratulations. For the seams use the Interlux seam compound, white for the topsides, brown for the bottom. Before you pay the seams paint them with an oils based paint, this keeps the solvents from leeching out of the seam compound into the wood and cotton and subsequently drying out. If you are doing a lot of seams, here's a trick I learned. Get some empty caulking tubes and mix your seam compound with a little paint, oil based for topsides or bottom paint for bottom seams and mix it to a caulking consistency. When filling the caulking tubes hold a high speed vibrating sander to the side of the tube. This gets all the trapped air out. I would highly recommend taping both sides of your seams, it's a pain in the ass but not as much of a pain as trying to clean up the excess caulking from around the seam. As you put the caulking in follow with a putty knife and pull your tape before the seam compound dries. Hope this helps, good luck-----gary

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gary

how do you remove the "sikaflex" in teakwood decks? Is there another product to seal the decks without removing the sikaflex?

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Hi;  
You are about to undertake a not so pleasant job. To get the polysulfide out of the seams involves using a razor knife, like a sheetrock knife, to cut it away from the plank edges and using the bent over sharp end of a file to pull it out of the seam. I have heard heating it helps but have not tried this. After the seams are all clean tape all the edges and put in a proper deck seam polysulfide, such as Detco or the new 3m stuff made for this purpose. The regular polysulfides do not work. Pull the tape before it sets. Sorry, once the old caulk needs to be replaced there is no quick fix, you must replace it.-----gary

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Hi Gary,

Here's a short question. Can Sikaflex 240 sealant be used in place of deck seam compound? It is a wooden (Spruce) deck caulked with cotton, so there would be no teak cleaners used on it, which I hear can soften the sealant.

Thanks again,
D. Baron

D.Baron;

No you can't use a single part polysulfide for deck seams although 3M has a new one they say is specifically designed for that, I think it is 401. Usually you use a 2 part mixture like Detco{sp?}. You can go to www.rotdoctor.com and see what he recommends.-----gary

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question: i have just removed all the caulking from my 34ft pacemaker and want to recaulk it i am anovice and would like to know the best and most reliable way to recaulk my boat and the best products to buy.I need your help!! thanks dennis hall

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Dennis;

I assume by removing the caulk you are just referring to the seam putty and not the cotton. Do not use polysulfide or epoxy to fill the seams rather use a seam compound, interlux and zspar make it, which is designed for that purpose. Clean the seams real well than paint them with an oil based paint or bottom paint. The paint keeps the solvents from leeching out of the compound into the wood. That way it lasts along time and doesn't dry out. There is a white seam compound for the topsides and a brown for the bottom. Tape both sides of your seam before putting in the putty, put it in, smooth it and pull the tape like this > back against itself. Use the blue tape. Taping is a pain in the butt, but it makes the job a lot easier in the long run. Here's a trick, if you have a lot of seams to do use a caulking gun. Get empty tubes, mix the compound with a little paint to get the right consistency, white for the topside, bottom paint for the bottom. Push the mixed compound into the caulking tube and hold a high speed finishing sander to the side of the tube. This vibrates the goo to the bottom and eliminates air pockets which are a real drag. Good luck-----Gary

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thanks but there is nothing left between the planks previous owner removed everything and then recaulked with who knows what. i am caulking the boat 34ft. carvel plank below the waterline only.what products should i use and how do i put it in???

thanks again

dennis hall stcatherines ont.

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Dennis:

Oh, that's another story. He must have pulled the old cotton out so you have to put new cotton in before you put in the seam compound as I related. Unfortunately caulking seams with cotton is a tricky business and needs to be done by an experienced caulker. The placement of the cotton and how tightly it is set can make or break [literally] a boat. I don't know where you are located but I would suggest you locate an old timer whose experienced with caulking and have him show you how to do it or if you have the money, hire someone. It has to be right.-----gary

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question: were can i find empty caulking tubes ,and or some company to fill them with a product.

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Hi:

You can purchase empty caulking tubes at most marine supply store or go to www.westsystem.com online. Here's a hyperlink WEST SYSTEM , product # 810.

You will have to fill them yourself. A good trick when filling is to periodically hold a high speed vibrating sander on the tube, this will compact the goo you are putting in the tube and eliminate air pockets which are a real pain in the ass when your caulking. Good luck-----gary

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Hi Gary,

I have a 75 year old timber carvel hulled river boat.I was told when I bought her that the hull had had all the planks removed and then refastened.that was as far as that owner went with it.I bought her 3years ago and have had her in my backyard since.I have done the rest of the boats restoration and I am nearing launchung and have left the hull till the end .Up until recently the hull has remained quite tight(I have left her open at the rear to let the rain keep her moist).I have put salt in her.A few shipwrights have looked at her and said she should be ok to put back in as she is.I am not as confident as they are as some of the gaps have opened up to abouta quarter of an inch.The hull is double planked,theinner planks are at about 45 degrees and the outer ones running fore and aft.In between the two layers of planks it looks like canvas.

What I need to know is whether as one shipwright said was that i could use plain old wood putty to fill in between the planks,this would suit me as I could do that easily and cheaply.On the other had I could use sikaflex which is a job I would hate to do and an expensive one.Could you shed some light on the matter for me please

KInd Regards

Tony Walker

Au

Tony:

Sounds like an interesting boat. By the way the boat is constructed it was never intended to be caulked so whatever you use should be very flexible so it squeezes out as the seams swell. What I usually use is a plastic roof cement used for patching leaky roofs. It is cheap, squeezes out good and is not too hard to cleanup. The other option is to do nothing but have a good bilge pump for a week or so. A wooden boat should totally swell up in 5-7 days. If it still leaks after that, there is a problem. Also if , when the boat is first launched water is gushing in, throw some sawdust in the water and swirl it around with a paddle so it sinks. It will temporarily clog the leaks. Stay away from sekaflex. Good luck with your new "old" boat-----gary

Hello, I recently purchased a 37' Novi style wooden lobster boat. When I purchased it I was told it needed to be re-caulked. I am looking for advice on doing this myself, is there any school in New England that gives courses on oakum type caulking or is there anyone who does it in the North Shore area of Massachusetts (Newburyport area). Also do I have any alternatives other than the traditional method? I will also need to do some caulking on the hull above the water line and I'm told I do not need to use oakum what would you recommend? I would appreciate any advice and a point in the right direction as I really want to do this the right way!!!
without landing in the poor house or sinking. Thank You Bill

Bill;

You have yourself a nice boat. A boat that has been built to be caulked will always have to be caulked the traditional way with oakum and or cotton. The process of laying the cotton or oakum in the seams is not an easy one and takes quite a bit of experience to get it right. Too loose and the boat will leak, too tight and you will either drive it through or cause the plank to buckle when it swells. You can really only learn to do it by having an experienced caulker teach you, plus you need access to the right tools. I would go to the local boatyard and find out who they use for their caulking work and hire them to teach you. Do not let anybody talk you into filling the seams with polysulfide caulking instead of the oakum and cotton. Also check your topside seams and see if they have cotton in them, if so you must replace it with same where necessary. Often one does not have to totally recaulk a boat but rather spot recaulk and reset the old stuff. You will need a caulker to look the boat over and tell you what it needs. With this job you do not want to compromise or cut corners. Good luck-----gary

question: Gary I just emailed you about the cowl vents, also I wanted to ask about caulking, I was taught a bit about caulking with cotton, I pretty much have the rippling technique down, but it very hard to tell whether I have over caulked, I am simply going by how the rest was in there. I am only patching, not recaulking the whole boat only maybe 30 linear ft. Though I know this is enough to screw up I don't think that I did, I am really just questioning the amount of cotton. The boat has been out of the water for 5 days so I am assuming that it has not expanded too much.

Any info about how to tell would be great.

Thanks

Joe

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Joe;

As far as how much your vents are worth, how much would you pay? If you are looking for used ones or want to sell those you have go to www.sailorman.com, or www.minneysyachtsurplus.com. With the caulking it is very easy to overcaulk a boat that has been out of the water for a long time and will swell a great deal when returned to the water, but with yours being out such a short time, unless you used a sledgehammer to seat the cotton, I would guess you are OK.

question: If a older stripped planked edge nailed boat dries out above the water line and shows openings 1/6 th and less, should one put seam compound in or hope for some swelling after launch. Can these planks shrink so much over time (30 years) that they never come back? thanks Dave.

email: kida @ uniserve .com

B1: Send to Gary Wheeler

Dave;

As you know a strip planked boat, unlike a carvel planked boat, does not depend on caulking and wood swelling to keep the water out, but rather is built as a solid unit. Usually these hulls had a fiberglass layer over the wood structure. To maintain the solidness and rigidity of the boat, I would fill those area with a thickened epoxy glue. That way you reduce the chance of flexibility which would open other seams as well. With a cravel planked boat, I would recommend the opposite.-----good luck-----gary

question: Hi gary, i've got some caulking tools i need to ask about. there are the reefing irons that look like 1/2 a tear drop plus the shaft and the others that are like 1/2 an arrow and the shaft. are they for reefing the seam compound or cement and not the cotton? does the fuller side of the tool go towards the seam? are the big hooked tools(some home made with a big ring as a handle end and some factory made with a normal iron end)for only cleaning the seams after the removal of the cotton or are they for pulling the cotton. i hope you understand the wy i've explained all this. please get back to me. none of the books really stray far from just the caulking process. thanks dave

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Dave:

Nice find. The way you describe them, they all sound like reefing irons. There use depends on the shape of the hook ends. Some should have a deeper hook for reaching the cotton while others maybe shallower for reefing the seam compound that went over the cotton. Also there are different sizes [widths] to match the variety of seam widths, as well as slightly different shapes for reefing deck seams. Many were custom made right on the job. If they saw heavy use the back side of the curve might be a bit flattened out from hammer blows. One would drive the hook into the seam and with the shank parallel to the seam tap the back of the hook to begin to lift the cotton then you would pull the shank to a right angle to the seam and the hook would lift out a small section of the cotton. Hopefully the cotton wouldn't break so you could continue this motion, kind of like using the old style can opener, until the seam was clear. The irons used to put the cotton in are shaped a bit like chisels with the bottom flared out. The tips are of veying thickness and as with the reefing

irons, some of the shanks were bent or twisted to aid caulking in odd places like the deck seam around the cabin house. I assume you have seen pictures of the special mallet used.

Caulking a boat is a true art, for the setting of the cotton is done more by feel than rule and the end results can determine the integrity of the vessel. I find it fun to do unless there is a mile of seams. If you are interested in selling them send along some pictures -----gary

must replace one bottom plank. also recaulk . need to know how to remove old bad caulk and how to put in new, what to use where to get it .can you give me some hints.

Hi

The best way to get the cotton out is to bend the tip of a metal file to a right angle and use the tip to pull out the cotton. Unfortunately caulking seams with cotton is a tricky business and needs to be done by an experienced caulker. The placement of the cotton and how tightly it is set can make or break [literally] a boat. I don't know where you are located but I would suggest you locate an old timer whose experienced with caulking and have him show you how to do it or if you have the money, hire someone. It has to be right. After the cotton is in you cover it with a seam compound. Do not use polysulfide or epoxy to fill the seams rather use a seam compound, interlux and zspar make it, which is deigned for that purpose. Clean the seams real well than paint them with an oil based paint or bottom paint. The paint keeps the solvents from leeching out of the compound into the wood. That way it lasts along time and doesn't dry out. There is a white seam compound for the topsides and a brown for the bottom. Tape both sides of your seam before putting in the putty, put it in, smooth it and pull the tape like this > back against itself. Use the blue tape. Taping is a pain in the butt, but it makes the job a lot easier in the long run. Hope this helps and good luck with your project.-----gary

question: Greetings from New Zealand,

I have been quite impressed with some of the common sense answers that come from your site, but sometimes some of the materials recommended are not available here or sell under different names. I have lived in he States so am not entirely unfamiliar with most terminology.

1. I would appreciate a bit more info on the the specs on the antifreeze which you suggest as an option to pacify rot. Antifreeze is not a big item here!.

2. I have a Herreschoff Marco polo built in Thailand in 69 from Changi, a very good worm resistant hardwood. This boat which I have had for 20 years is well built straight fromn the plans, but I wish they had spent a bit more on the fastenings as I have an ongoing rust problem and over the years have tried lots of ways to stop the once galvanised lag or coach screws from weeping. I am now, and I wish I had started this earlier, drilling out the fastenings with a 3/4 ins extended hole saw and replacing them with hardwood trunnels which I am epoxying in. This seems to be working but will probably take me the rest of my life to finish! Also the frame size is really a bit borderline for this, being about 2 1/2 x2/1/2 Being long and skinny she tends to open her topside seams, and some of her underwater ones as well, on my annual safaris to Fiji where I spend our N.Z winters, and up to now I have repainted this boat every year which I am getting very sick of doing. I do not seem t!

! to be able to come up with a product that does not crack, so I am contemplating routing out the seams, or using a small skilsaw as you suggested elsewhere, and putting in a paintable modern filler rather than putty. Some of the recent fillers seem to make some grand claims as to their suitability and I wonder what you would recommend. Most of the stuff in the West marine cataloge can be found here.

3. Although I am not really at this stage yet, have you any info on the old last resort of pouring concrete into wooden bilges, as a leak stopper. I intend to haul the boat again in Fiji and perhaps recaulk some more seams, cotton, as I did a couple of years ago. I tend to put replacing any bottom fastenings in the too difficult category; I can not draw any of the old fastenings without breaking them, changi has a very firm grip! Sorry to be so verbose, but I would much appreciate any feedback you have on the topside problem. I am sure it has all happened a million times before!.

Regards Jack Hargraves

Jack;

Nice boat. I have Herreshoff's book "Sensible Cruising Designs" in front of me turned to the chapter on The Marco Polo. Very complete drawings of her lines, lovely. As far as the antifreeze rot preventative I will refer you to another website which has a complete thesis on it Cannel on Rot & Antifreeze [<http://home.att.net/~davecarnell/>].

With your topside problem, assuming your fastenings are OK, epoxying softwood splines in the seams might be a good alternative. This would best be done in cool. I have seen this done with success in the San Francisco Bay area but that is not a tropical climate. The high tech polysulfide could work but if it fails getting it out of the seams is a real bitch. Also I don't think the stuff right out of a tube would be adequate, the two part mix is better. I know Smith & Co. in Richmond Ca. had a good product plus the guy is a chemist and he could advise you. Go to his site and email him---www.smithandcompany.org----. Also if I wanted answers from experienced people, I would ask my question in the forum at ---www.woodenboat.com---- and or --www.boatbuilder.com-----. I like your trunnel idea for curing the bleeder problem. Cement in the bilge is OK as long as it is seated in roofing cement or some other gooey stuff to keep it from direct contact with the wood, although the best way to stop the leaks, as you know, is to refasten and recaulk where necessary even if you have to sister fastenings rather than pulling out the old ones. Hope this helps, ask more if needed. There is snow on the ground here in Maine, I am a bit jealous of your ability to head over to Fiji when the spirit moves you. Send me a photo of your boat-----gary

Dear Gary,

Thank you for your prompt reply you have basically reinforced my own thoughts. With the trunnels I run a small saw cut down one side to allow the glue to squeeze out. A web search for Trunnels does not turn up much, but Chappell's Wooden boats gives sizes which coincidentally agree with the 3/4 ins I ended up with for my boat. I have a friend building a very traditional boat with heavy scantlings she (yes she) is contemplating trunneling the topsides to save a bit of cash. I think with a powerful drill this could be quite a fast way, certainly a lot faster than using copper nails and roves which I once did on an Atkin Ingrid we built when epoxy was a very suspicious substance.

Jack

Hi Gary,

I am looking at a 1947 Rhodes design c/b sloop, mahogany over oak with teak deck. It will be my first wooden boat so I have some questions. She has been out of the water for two years and there is daylight showing...

The survey results are positive with no rot, a few ribs cracked and the mast is cracked at the spreader, some

caulking repairs are needed where the salon heater fuel tank leaked as well. I will have the mast repaired professionally but will be doing as much of the rest as I can myself.

Dumb questions;

Will the gaps in the hull planking close up without issue once she is back in the water or is there something I should do first?

Is there a reference source for caulking repair?

thanks in advance

Dennis

Dennis;

Nice boat and good survey considering the age. Two years of drying out shrinks the planks pretty good so they have lots of swelling to do. Other than sinking the boat for a week or two, which is a tried and true method albeit a bit messy, I would put roofing cement {Henry's wet and dry comes in cans and tubes} in the seams, put the boat in the water for the season, then when you haul her next scrape off all the tar that was squeezed out of the seam and fix any persistent leaks that were discovered. You can't really recaulk the seams with new cotton until they have returned to shape and putting anything stiff in the seam would cause the plank to buckle as it swells. Hope this helps and feel free to ask more as your labor of love progresses-----gary

question: I have an edge glued cedar on oak planked "laurent giles" sloop she has been out of the water for a couple of months in Vancouver BC (not the tropics) the cedar has shrunk on a few of the seams! I have had the boat out of the water for a few months in years gone by and the cedar swelled up enough to keep out the water after about an hour or so, this time however I can see daylight from inside and has me worried, whether the pump can keep up while she swells. Should I dress the seams with seam compound to aid in sealing till the hull planking swells? joe

Joe:

Nice boat. Eventually you should reglue those seams but for now, to ease your water intake worries, I would put flexible caulking, not polysulfide, in those seams to keep the water out. Wet & Dry Roof patch in the tube works good too. If you want to avoid the seam compound, get a big bag full of fine saw dust and when the boat is launched throw a bunch in the water and swirl it with a paddle so it sinks. It will clog the leaks and allow the boat to swell, but it also will wash out if the boat is used before it swells. Have fun-----g

Gary;

We currently have our 1955 32' Monk design boat hauled out to re-caulk the hull seams. It is a carvel-plank design, 7/8" mahogany planks. We have removed what remains of the cotton but are now faced with larger than designed grooves and in some places, gaps right through to the inside of the hull. How do we deal with this? We originally had planned on treating the seams first with a red lead compound followed by a layer of oakum caulking in the deep seams, followed by cotton then re-applying red lead over top of that followed by a Sikaflex seam compound but now we keep hearing that Portland Cement would be a better filler. What would you recommend. As well, because the boat was poorly maintained over the years there is a great deal of oil that has permeated the seams - will this be a problem? Any help you can offer will be greatly appreciated -

Thanks,
Rob

Rob;

I agree with all you intend to do except for the sikaflex and I am not sure the cement would adhere to the oil saturated wood. My choice would be Interlux bottom seam compound. Mix it with a little bottom paint to get a peanut butter consistency and put it in caulking tubes. As you load the tube, occasionally apply a high speed vibrating sander to the side of the tube, this will drive the air out. Make sur you tape your seams before you seam compound them, red lead or bottom paint in the seams on top of the new caulk is good. On large seams I usually lay a V shaped spline in the seam, fat side inboard , so there is something to caulk against. It might be helpful to fund a local with caulking experience to oversee your project. As you know, caulking is critical not only to keep the water out but to keep the structure of the boat tight but subtle----good luck-----g

Hi! I was wondering if I could ask you a question....

I have a 37 foot double diagonal carvel planked wooden boat. Pulled it out of the water due to severe leaks. It has now been out of the water for 2 weeks and of course the wood is shrinking. In this particular boat, the planks have been butted together so tightly that no caulking was used, only putty. Now all the old putty is cracking out. I did a test experiment on reapplying new putty mixed with red lead paint...this appears to be cracking as well. Should I now rake all the seams out and use Everdure (wood preserver) and then Sikaflex or should I persist with the putty?

Anxiously awaiting your gracious reply,

Yours truly,

I Just Want to Get Back In The Water :) (This year)

(Chris Young, Perth, Western Australia)

Chris:

Sounds like a nice boat. If the leaks you had were caused by open seams, after reefing the seams, putting a thread of cotton string pushed in along the seam and then caulked over with a caulking compound would solve the problem. If the old caulking is cracking, you have to reef it out and put in new. If you use sikaflex, which is OK in this application, leave the seams unpainted so the sikaflex will stick. If you use regular oil based seam compound, paint the seams first so the oil doesn't leach into the wood and dry out the caulk causing cracking. Red lead isn't helpful mixed in with the seam compound but works well painted onto the seam and let dry before applying the oil based caulk. Hope this helps and feel free to ask more as needed-----gary

Dear Gary,

Thankyou for the advice I decided to go with the sika below the waterline and regular oil based putty for the topsides. Today after putting sika in most of the seams I had to wet the boat as it is summer here downunder and we had a real scorcher, over the past few days I have noticed the boat is really drying out so I got out the hose. After hosing down the topsides I sat under the boat and watched at least nine leaks coming through the hull. I have not yet filled the topsides so I knew that water would travel into the bilge's.

I know that it is hard for you to give advice without seeing the boat, but in what I have told you do think that these leaks will close up after the boat goes in the water ?

My next idea is to glass the leaking areas with epoxy, what do you think?

I did my apprenticeship twelve years ago and I am a shipwright, although I have not worked on boats since.

When I did my apprenticeship we never did any work on wooden boats.

Kind Regards,

Chris Young.

Chris;

Don't panic, it most likely will swell up just fine, although it could take a week or so and you'll need a good bilge pump. Normally you should do your caulking close to the time the boat will be put in, but if this is not the case you can go over the bottom carefully right before launch and fill any suspicious areas. An old trick to slow down leaks on a newly launched wooden boat is to take fine sawdust, dump it into the water in the proximity of a leak, and swirl the water with a paddle which makes the sawdust sink and it is sucked into the leaking cracks stopping the leak. Works great but eventually washes out and you have to do it again. NO EPOXY, epoxy has little flexibility and the wood has a great deal which means they are incompatible and eventually separate causing all kinds of problems. When you fix a wooden boat, do your best to use the same materials and methods it was built with.-----have fun-g

Hello Gary, I have recently purchased an old 36' wooden hull boat and have been told that extensive repairs are required along the garboard strake seams. As I would like to do the work myself I am on a search for information on how to do the job properly; types of woods and materials to use etc.-proper methods of corking and sealing - preserving - painting. Any information or references would be greatly appreciated.

Thanks Larry

Larry:

Your best bet is to find a local old time boat carpenter to give you a hand. There are a lot of different variables in repairing a garboard plank properly. The garboard takes a lot of stress and therefore puts both the fastenings and cotton caulking under stress and over time they have to be replaced. You can go to www.woodenboat.com and get a book on wood boat repair and also read the section on caulking in the question pages of my website www.mastmate.com/questions.htm . I can help you further with specific questions as they arise. good luck-----gary

question: Gary,

I was wondering if you had some good ideas on your side of the pond!

I am currently racing and maintaining a 50 year old 21 foot clinker built (elm planking) Victory class keelboat (a one design class only raced in Portsmouth, UK and Gibraltar). The hull is starting to leak a bit too much - I think for 3 reasons:-

One plank has local impact damage cracks in the middle (not at the overlap edges),

The upper planking has dried out on the port side facing the sun (when berthed) so when the boat heels over (30..40 degrees is typical for these boats having a shallow long keel) the water comes in through the seams - I was thinking of hanging some tarpaulin over the side to shade the hull at its berth.

The underwater seams are generally letting in more water than they used to - probably a combination of me pushing the boat harder than previous helms causing more flexing and my accidental removal of some of the

unknown (probably silicone) sealant used on the exterior overlap joints when doing the annual repaint/antifoul.

Q1. Do you have any simple suggestions for sealing / local reinforcing the impact damage (apart from rivetting an extra part rib across the damaged area which I believe is the 'correct' repair but beyond my skills. I was thinking of using silicone sealant externally as a small bead over the cracks and internally bonding a piece of plywood over the damaged area but I don't know with what - epoxy?

Q2. Do you have any suggestions for resealing the the exterior joints - I was thinking of using a silicone sealant as a bead in the included angle between the edge of a plank and the face of the one below it after priming (it should be flexible and waterproof enough) - I will try to ensure that no silicone sealant gets into any open seams - possibly by filling these with a soft putty first - what sort of putty?

Q3. Do you know of any cheap, non-destructive way of checking the state of the mild steel keelbolts which attach the 1000 lbs of rough cast scrap iron long keel to the bottom of the hull? They look OK from the top but that gives no clue of their state further down!

Thanking you in anticipation,
Regards, Andrew

Andrew:

A good old boat with typical aging problems, no doubt everything is moving about making keeping the water out more difficult. Silicone caulk does not hold up well in a marine environment. 3m makes a polysulfide caulking called 5200 which will seal and bond anything to anything. Best if it is applied to bare wood surface and don't expect to easily remove it down the line. Before applying it to the laps I would run some cotton string up under the lap using a pizza cutter or similar tool. The wood will swell around the string but putty would keep the seam open. 5200 would also work well to bond a plywood backing piece to your cracked plank area. The only way I know to test keel bolt integrity outside of X-ray is to sound them out with a metal hammer. Tap briskly on the top nuts and if the sound is sharp the bolt is probably OK, but if you get a dead thud there could be a problem. No worry though, these boats are held together by memory anyway. Hope this helps, feel free to ask more-----gary

question: Gary,

Well I really have a mess now and my situation is a good lesson to not listen to "armchair boatwrights." I have a 38' Laurent-Giles channel class sloop with 1" and 1/8" mahogany planking bronze riveted to 3/4" x 1/2" frames spaced every 6 inches. She had sank in her slip twice before I obtained her and was advised to reef and fill the seams with epoxy and saturate the hull inside and out with epoxy. After a couple months in her slip I got that dreaded call that she sank again. What is strange is that there was only a small leak and she seemed to fail all at once. When we got her out I see some of the planks are buckling and some are cracking as if the planking is being stretched apart. I have some ideas and request your thoughts on them: First, is she now beyond repair? Second, can she be glassed over with about 6 fiberglass laminates as described in Allen Viates's "Covering Wooden Boats in Fiberglass" book? I've heard carvel planking may not be able to be contained !

practically. Third, route out the seams and caulk her in the traditional fashion? If I route out the seams how would I get a tapered seem? Thanks for your advise.

Hi;

Sorry to hear of your problem. Beautiful well built boat. As you now know, wood boats need to be repaired as they were built. The epoxy in the seams inhibited the planks from swelling in the direction intended, around the cotton caulking, resulting in the distortions you mentioned. Hopefully, this did not result in the planks pulling away from the ribs. The epoxy applied to the inside and out side of the planks will peel off over time, although it might be best to sand it off the outside so paint will not peel off with the epoxy. Usually the epoxy putty in the seams does not stick that well to the plank edges (leaks!) and maybe easier to remove than you think i.e. a good reefing iron might do it. Also a circular saw with a thin carbide blade set shy of the full seam depth and guided with a tacked on batten may get out most of it without loosing the bevel or a router with narrow blade used the same way. If the bevel is removed you simply cut some beveled strips of soft wood and glue them to one side of the seam. To preserve the boats worth and longevity, I would try to remove the epoxy and caulk it properly. But if this can't work I see a lot of old wood carvel planked lobster boats here in Main still working because they were glassed over. There's a biaxial glass, roving and matt sandwiched together, that is used. Basically you use your hull as a mold and build a fiberglass boat over it. If the glass is heavy enough the movement of the wood planking will not crack the hull. Hope this helps and feel free to ask more. See if you can get the armchair boatwright who gave you the epoxy advice to give you a hand.-----good luck---gary

question: Hi Gary, Nice website.

I have just purchased a 1943 Swedish ocean racer loa 39' lwl 28' beam 8'. As you probably know, the boat is carvel planked (mahogany on oak frames). For 60 years old the planks are in very good shape. Although the boat hasn't been sailed in 8 years, the planks above the waterline seam relatively tight (the topsides are very dry). I can see air in a few places and it doesn't look like it has ever been caulked (cotton or otherwise) The topsides were varnished but this has mostly peeled and I plan to paint. I don't believe the bottom was ever caulked either. (is this normal?) I would like to caulk the boat before putting it back in the water but still have other chores to complete on the boat first so it will sit out over the winter (no snow). Do I have to use cotton? Except for a short stint last summer, the boat has always been in the water. There is very little leakage except for an open seam next to the propellor strut. The propellor shaft is offset and the strut! is mounted on the planks over a frame There is no re-enforcing chock on the inside so installing one will probable help with the leaking. What should I do with respect to caulking the hull? I can barely get a fingernail between the planks.
Peter

Peter:

Sounds like a beautiful boat and it seems she has a good owner. Many boats of this era were matched planked ie. well fitted planks with tight seams that only relied on the swelling wood for water tightness. You couldn't caulk it with cotton if you wanted for to receive the cotton without driving it through the other side, the seams must be beveled < and match seams are not beveled. Before her next splash get some roof patch tar and push it into the open seams. This will keep her watertight while she swells and the tar will merely squeeze out of the seam without interfering with the swelling. Do not use any high tech stuff in the seams, which many might recommend, for that would inhibit swelling and cause the planks to cup. If at the next haulout ther are still some open seams, you can add a spline. Enjoy your classic and feel free to ask more as needed-----send a pic-----gary

.
Thanx for the quick response Gary, Your reply makes a lot of sense. As I indicated, the varnish is pretty well gone. Unfortunately the britework on the deck is the same way. All original mahogany, ash trim and solid vertical grain fir decks. I am thinking of painting topsides white instead of varnish. Any downside to this? Do I paint or tar first? Also, are there good oil products for britework as opposed to varnish. I used penofin on my house deck this year instead of paint or stain and couldn't be happier. I understand that they make a marine version as well. I have attached a couple of pics. She's in rough shape cosmetically, but otherwise fairly sound for a 60 year old boat. The second pic gives you an indication of the quality of the joinery. The boat was built in Arendal, Sweden and designed

by Erik Salander as the 3rd Baltic Rule 8 made (o8S3, Gullveig I). The third and fourth pics I have attached is her bigger, younger sister (Gullveig II, 47ft loa built in 1947).

.
Peter:

Great pics, is that the Oakland, San Francisco Bay bridge in the Background, looks like you are in the south bay. I worked on wood boats in SF Bay for 25 years and remember seeing that boat or a sister. I should have stated that the tar was best used on the bottom seams, on the topside I would just use the Interlux topside seam compound which remains pliable. Apply the seam compound before you paint. Eventually you may need to router out the topside seams and put in splines, glued to one side of the seam, but this would depend on how well the present seams swell. I personally like the grey look on unvarnished wood but a good oil is always healthy for the wood. Any good penetrating oil is fine, I know some who use transmission fluid.-----gary

.
Looks like Oakland but I didn't take the picture so I'm not sure. I bought the boat in Seattle. The previous owner was from Sonoma. I'm not sure where he moored but the last active registration was 1995 (California). It was originally imported from Sweden in 1952 and moored at San Pedro yard where it was raced for some time The boat now resides in my back yard in White Rock (Vancouver), Canada. The plan is to refurbish the exterior and get it ready for sailing next spring. The interior will be finished as time permits. All mahogany solids there too.

I will leave the fir deck natural and clean/recaulk/sand/seal but will oil or varnish the trim as it is mostly mahogany. The canvass on the cabin top is in bad shape, so I lifted a section. All solid vertical-grain planking under canvass similar to the deck (no butt joints), but is mahogany. Looks like it just came out of the yard (still red). Will probably caulk and oil this. So if I understand correctly, put roofing tar in the seams below the waterline and interlux above. Paint bottom and topsides after caulking.

Another question. Mast appears to be in reasonable shape. A few open grains here and there but glue joints show no sign of separation except near

mast partner where the solid part joins the hollow part. Could I get away with cleaning this out, putting glue in and put a couple of bands on the reinforce, or should I take this section apart and reglue?. I also think it was shortened at some point because it is only 43 ft. long. I see no sign of a second spreader being there. Sail area is only about 460 sq.ft. (100% foretriangle). Can these masts be lengthened easily or is it better to find a taller replacement?

Regards,
Peter

Peter:

Right on the caulking and painting. Cleaning out the troubled glue seams on the mast and adding some epoxy glue is a good idea. It is very difficult to open up just part of the mast and reglue. If you want extra reassurance you can band the mast in that area with a couple layers of fiberglass tape. The rig was probably shortened to better deal with the Bay Area's heavy winds {every afternoon 20-30knots}. As far as lengthening the mast, I would sail it first and see how she does. She's old and the days of really putting her on her ear should be over. But the mast could be lengthened remembering all mast scarfs must have a ratio of at least 12 to 1.-----g

question: Dear mr Wheeler

Unbelievable site! I love wooden boats but know little about their maintenance. Anyway I saw a 25' folkboat built around the '60s and I would like to get it. The problem is that there are some severe gaps between the planks (aprox. 1 to 2 cm) of the underwater part of her. A carpenter that saw it today told me that they will not come in position if we put the boat into the water and leave it for a couple of days. He says that because the planks are stitched this is very difficult and also that it is very expensive and time consuming to replace them. The owner sells her for 2000 euro but I can't imagine what the final cost will be. She needs a lot of work also inside for maintenance and decoration but I was hoping to do it myself. The good news are that the mast and the rigs are in a good condition and there are sails available. I would appreciate your opinion and look

forward hearing from you. Thanks in advance, Nikolas Anthis Corfu, Greece.

Nikolas;

Thanks for the good words. Folkboats are wonderful boats. The best thing to do is fill the gaps with roof tar patching product, put the boat in the water for a couple of weeks and pull it back out and see how the seams look. If the planks are lapstrake, overlapping, they should swell enough but if the planks are butted, carvel planking, they may not swell enough and you would have to add a spline, a thin piece of wood. There is no reason you can't do the work yourself. Let me know if I can be of further assistance. Folkboats sell in the US for \$10,000 in good shape, \$5,000 if work needed-----gary

question: dear mr Boatwright,

Owning a carvel built 35" sailboat I am restoring I would appreciate your opinion. The hull is internally epoxy impregnated ? the mahogany planks were originally 5/8" now 14 mm is remaining ; all frames and rivets/roves are in good condition. the boat is very dry. Some of the seams are open 1 to 2 mm but epoxy has run into the seams.

I do not like to fully epoxy/fiber the hull as was planned by the previous owner, but this I am afraid is the easiest . Is it possible to spline the boat ; is it better to glue the splines to one plankside only -> movement. Do I use softwood like cedar for the splines (more compression?) or can I use mahogany? read somewhere there is a great risk of damage using splines on a hardwood planked boat? Is it necessary to use thick splines or will 3 or 4mm do?

Thanks you for your advice

Werner

Werner:

Sounds like an interesting boat. I would need to know how long the boat has been out of the water and if the seams were originally caulked with cotton or were matched planked, tight with no need of caulk. It would be best to keep the boat as originally built, not fiber glassing it. The epoxy on the inside would not be a problem for it doesn't impregnate the wood very far. If you put in splines you are basically taking planks that are made to be flexible and expand and contract and making them rigid. When they swell they will cup away from the frames causing havoc. If a seam is too wide to caulk properly one would put in a softwood beveled > spline glued to one edge and caulked to the other. On some very tired old carvel planked boats, the technique of cold molding, adding three layers of diagonal thin strips epoxied together, is used. With this technique as well as with multiple layer glassing, all seams are splined and epoxied before the outer skin is applied. But with a boat that has good frames and sound fastenings, none of these exotic, time consuming and expensive methods should be needed. Feel free to ask more.-----gary

Hi! I only recently became aware of your generous sharing of knowledge and would hope for a brief reply to the following:

I have a 1963 46' CC Constellation which I have now owned and repaired / maintained for 15 years in fresh water. I properly removed and replaced the caulk in the teak deck seams about 10 years ago using Boatlife 2 part polysulfide. I was not advised regarding a "breaker bond" and thus did not utilize such. The authentic seams began to delaminate and "crack" last summer while the false seams remain perfect. (Every third seam is authentic). Boatlife suggested the use of their one part "liquid polysulfide" preceded by their primer with the liquid caulk pressed into the hairline cracks in the existing caulk. That lasts about 3 weeks and the cracks reappear.

I have read everything you have already suggested on this topic and specifically note your remark "Sorry, but once the old caulk needs to be replaced there is no quick fix, you must replace it". I can scarf and replace the caulk and am aware of the products and procedures you have recommended, but I have two questions...

1) Do you recommend a breaker bond of fine line tape? (I can see both the pro's and cons of this, but it is a heck of a lot of work and the bottom of the seam is not actually caulked should side delamination occur in the future.)

2) With all of our modern day and technologically sophisticated sealers, glues, caulks and so forth, it seems that there should be SOMETHING that could be used to seal the hairline cracks in the existing caulk, by

taping on both sides and paying the "whatever" into the cracks. Have you ever heard of anything that works in this regard?

Thank you in advance for the kindness of your reply.

Rick

Rick:

Thanks for the compliment on the site. I am not familiar with the breaker tape technique, so I can't really comment on its viability one way or another. As far as a way to fill in those small cracks in the caulking, outside of painting the decks, there is no simple fix that will work over time that I know of. But a guy who might is Smith at Smith Inc. in Richmond California. Smith is a chemist who makes up and sells gooey compounds for use on boats and he likes to solve problems. You can get the Tel # from information. By the way, nice boat----good luck-----g

question: Gary please advise, I have a 1956 35 ft Owens double plank mahogany, its been out of the water for two yrs now, the hull and bottom planks are shrinking badly ,ie quarter inch gaps or more,what should I use to seal the seams, I started using 3m 5200, a mistake I think ,the planks contined to shrink and it pulled away in the seams,the boat will be going back in the water about the summer of 04 ,should I wait to finish until its closer,to that time ,or can I continue to work on it this winter, One other thing I dont understand , if a hull is painted and reseamed, how does it continue to swell after its in the water ,thanks for any advise ,regards ,walt waring.

Walt;

Good boat, and yes, 5200 is not the way to go, nasty goooooo0000. First go to this page on my website and read the Q & A's on caulking.---<http://www.mastmate.com/a-f.html>----- . I assume since the boat is double planked the seams are matched tight rather than caulked with cotton. Basically the boat has to swell before you can really add any caulking to the seams . What I suggest is a month before launching staple to the bottom a bunch of towels, burlap or any other absorbent material and keep them soaked with water. If you have access to the interior planks, do the same. Do this for two weeks, you'll be amazed how much the planks swell. Uncover and let it dry out for a week or so. Then apply your seam compound, not a polysulfide, rather a marine bottom seam compound, or if your low on cash Thompsons roof patch tar works ok You'll find more details on how to do this on the webpage. Seam compound must be flexible to allow the expansion and shrinkage common with a wood boat. If you would fill the seams with a solid material the planks would have no room to expand and would cup (and pull away from the frames. After checking out the webpage, if you have further questions feel free to ask. Have fun-----gary

hi gary

i have finished caulking the bottom of my 63 owens, question should i pre soak the hull for a few days before i relaunch the boat

question no2 this boat came from the great lakes ergo no zinks were placed on the boat , should i put zincs on the shafts, stern and should i ground the through hull fittings i have installed heat exchangers with the sacrificial anodes

Good on you, launchtime of a rehabbed wooden boat, the most feared and exciting event of one's life. Have no fear, just a very good bilge pump and strong batteries. Unless you would keep the boat really soaked down for a week or two, this process does more for the owners psychological state than swelling the boat. On launch day have a bag of sawdust handy to dump in the water and swirl with a paddle to clog any waterfall leaks, other than that, wait and see, and have a stiff drink. The boat should halve the amount of water it takes on daily, after a week if there are still bad leaks further examination is necessary. The amount of zincs you use depends on the different types of metals that are interacting below the waterline. If a boat is bronzed fastened but has a stainless shaft and rudder fittings, you would need zincs wired to the lesser metal, the stainless in this case. If your boat has a stainless shaft and bronze prop, you will need shaft zincs. I think grounding and zincing through hulls is a bit much , plus one must be careful not to overzinc which can exacerbate the electrolysis. You have a problem if you notice a white fuzziness in the wood around a through hull, this sometimes happens when a boat is docked in a marina with a lot of other boats wired to the docks and leaking electricity into the water, resulting in romped electrolysis. Happy launch day-----gary .

question: Dear Gary, I recently purchased a 1956 Chris Craft Constellation 35'. The hull seems very sound, when I purchased the boat I carefully examined the hull for leaks or soft areas and found none. She was very dry until this weekend, when after showing the folks on my dock that the Hercules mills would put her on a plane she started shipping water from just below her port chine about ten feet from the bow. I went over the side and found a gap where some caulking seems to have come adrift in a 3 ft strip. I went up to the marina, got some 3M 5200 caulk. I then went back over the side, sanded the area as best I could being under a bouncing boat then packed and smeared the seam with caulk. My leak is now stopped but I am wondering how long this will hold. I'm putting high speed runs on hold for now, and would like to wait 'till fall to pull and repair her if possible. Any recommendations including materials would be greatly appreciated, I have considered epoxy and 'glass from the waterline down.

Thanks, Mark

Mark;

Nice classic boat and good emergency repair. No reason to pull out the fiberglass and epoxy just yet. For simplicity sake and keeping the boat original, on haul out I would advise repairing her in the traditional way. First I would thoroughly reef out and clean the offending seam, then I would pull a few fastenings in the area and check their condition. There is a good chance you will need to refasten this area and then recaulk with cotton and seam compound. I would do the same to the opposite chine as well and of course, if the fastenings are questionable, I would spot check others throughout the bottom of the hull. If these fixes do not do it, unlikely, pull out the smelly stuff. Good luck and enjoy that wonderful classic. Ask more if needed-----g

question: Gary I have recently purchased a 1968 40ft PaceMaker, she has been dry docked for about 2 years. Overall she is in great shape, but the seams

have opened up quite a bit from the waterline down, no cotton is showing just looks like seam compound is brittle and flaking out in some places. I planned on sanding her down to wood below water line and replacing seam compound and epoxing then bottom paint, if no cotton is showing is just seam compound ok, she is carvel planked. any tips you could give me would be greatly appreciated, thanks Charles. PS any info on PaceMakers common problems/flaws would help also, or a PaceMaker website/group that may have some info. thanks Charles.

Charles;

Just new seam compound is fine but in removing the old you may loosen some of the cotton which would need to be reset, (tapped in) with a caulking iron. Use the brown bottom seam compound from Interlux, if it is a little too stiff, mix in some bottom paint. Taking all the bottom paint off is OK but there is nothing wrong with leaving paint that still has good adhesion. Here's a couple of Pacemaker forum links Good luck---nice boat----g
<http://www.network54.com/Forum/225904>
<http://www.northfork.net/wwwboard/messages/171.html>

question: Gary,
I'm considering the purchase of a 1970 42' Pacemaker Sport Fisher. She's been out of the water now for approx. 1+ year. I'm planning on totally re-caulking the bottom and repainting the bottom. After what I've read in your replies, I will leave the cotton alone. I have several questions: I'm pretty careful about what I do so, how long should she take on water after I launch her, and how much should she leak. I'm a little nervous about launching her, climbing onboard, looking in the bilge and screaming "oh, my God get her back out quick". As a side note this is quite an adventure I'm undertaking I live in Anchorage Alaska and the boat is on the East coast. So, I will work on her all winter 'til spring, cruise her down through the Panama Canal up the West coast, through the Inside Passage, across the Gulf Of Alaska, and finally home to Seward. She'll work as a salmon charter boat from there. Lots of work but, lots of fun, too...great site great knowledge - Thanks J.P.

JP

Thanks for the compliment on the site. Pacemaker's are good boats and even one out of the water for a couple of years should be OK if it was properly supported and protected from fresh water. Assuming this is the case, your recaulk plan is correct although I would find a way to swell the planks a bit before you apply new seam compound. Stapling cloths or foam to the bottom and keeping it damp for a couple weeks would help immensely. Also, although I think your trip plans are noble and adventurous, the practical aspects of fuel costs and wear and tear on the boat may outweigh these and lead you more to the practical alternative of using the travel money to have the boat trucked or shipped by ship to your home and work on it there, or look for a similar vessel closer to home. But sometimes Dreams are more important than practical sense. To your point, when you launch the boat have a good 110 submersible pump available for backup, also have a bag of sawdust which can be dumped into the water and swirled about with paddle so it sinks and temporarily clogs the leaky seams and the leaks should halve themselves every 24 hrs and completely stop in 5-7 days. Leaks beyond that time would have to be attended to. Good luck-----gary

question: Hi Gary, I have a 32' converted troller built in 1952. Yellow cedar over oak ribs. Most of the hull is sound and was re-chaulked 2 ½ years ago. The garboard plank is getting punky (soft) at the bottom 2" where it meets the keel. So are the ribs in this area. When I bought the boat the garboard seam had lead sheeting with copper nails. The seam in his area is up to ½" in places so I re-chaulked it with oakum. This started to rot out after a year, so I re-chaulked it again and sealed it with roofing tar and copper sheeting. It has now been 1 ½ years and the bilge pump is turning on every 4 hours, so I suspect the seam has once again started to go. I wonder if I should have left the copper sheeting off, and just redone the seam every year. Any ideas on a patch job that does not involve replacing the ribs and garboard planks?? (Boat is only worth 15K)---Thanks--Chris

CHRIS;

This is often a problem on most older wooden boats with engines for no matter how much care is given, fuel ends up in the bilge and breaks down the wood fibers as well as the cotton and oakum fibers at the garboard seam. Eventually one must face the inevitable and pull the garboard, replace some ribs and floors, and install a new one. Until one reaches this final choice, your fix of a copper or lead patch is the best alternative. In doing this one must make sure the patch itself is wide enough to not only bridge the seam but get into good wood where the fastenings will hold. Best to use bronze ring nails for fasteners. Also use the roofing cement liberally with it squeezing out everywhere when compressed. In recaulking the seam, because of the wood deterioration, it is difficult to seat the cotton or oakum properly, so often with an exceptionally wide seam it is helpful to insert a beveled batten, fat end in, and caulk it on one side to the adjacent plank. Hope this helps-----gary

question: I have aquired a 33' wheeler playmate, bought as a 1942, but unsure. I have discovered a 1949 penny glued to the wheel, so Im thinking 49. It is taking on some water. My question is, should a person reef all seams below waterline and recaulk or can I just try for the quick fix of the leaks. I was told that just doing spots can cause planks to spring, true??? Darcy

Darcy;

Nice boat. Caulking is a tricky business and should be done by someone with considerable experience. Over-caulking usually occurs when a boat has been out of the water for quite awhile and the plank wood has shrunk a bit and someone pounds in tight some new cotton and when the boat is back in the water the planks try to swell but are hindered by the cotton and end up cupping or springing away from the frames. When one caulks an already swelled plank seam there is little danger of caulking to tight. On inboard power boats leaks usually pop up around the garboard seam, the seam closest to the keel. The fibers in the cotton caulk break down when saturated with oil and fuel, which no matter how fastidious an owner, sooner or later ends up in the bilge and leaches into the garboard seam. So, spot caulking done correctly poses no problem but it is important that the seam to be done is reefed out so when recaulked one is not driving the old cotton through the inside of the plank seam. Also when you are checking out the bottom for leaks, pull a couple of fastenings to make sure they are not part of your problem. Hope this helps, feel free to ask more as needed.-----gary

Thanks for the info, how do you tell by pulling a couple of fasteners, just

by the feel???

Darcy

Darcy;

You are basically looking at the condition of the metal to see its level of deterioration. A great deal depends on the type of metal used, steel, bronze or monel, and the environment the boat is used in, salt or fresh water. Use in salt water, especially if the boat sits a long time in that environment, one must be concerned with electrolysis, wherein the salt water causes a battery effect between two differing metals resulting in one metal being sacrificed to the other. If this has occurred the fastening effected will look "eaten up". No such problem if the boat has been used mainly in fresh water. Normally if a fastening comes out in one piece it is probably doing its job. If not you will need some on the scene expert advice.-----g

question: Hello. We have a 38ft 1946 built kauri carvel launch. we have stripped the paint off back to wood. I have been told to apply a thin coat of epoxy resin over the planks then followed up by a thicker coat, so that the new paint would adhere to better. But then again I have also had advise the resin should not be applied to carvel planks. Also on calking the boat I have been told to use sika flex but this product grows and shows unsightly seam lines and is very hard to sand. I was told to use putty with yacht primer worked into the putty, I was wondering what your thoughts were. Hope you can add some light. Thanks Dave ps the boat is in New Zealand.

Dave;

Good advice on no resin on planks, they must be able to breath and expand and contract which is badly inhibited by the resin. Use a good marine primer for an alkyd or oil based finish coat. Caulk advice also right on, no polysulfides, oil based seam compound with some paint mixed in to get right consistency. Also it is a good idea to paint the seams before applying the compound, this prevents the oils from the compound leaching into the wood and drying out. Whoever is giving you this correct advice knows their stuff-----gary

question: Gary, I have read your fine comments about recaulking the hull. I want to recaulk the cabin sides as you suggest but keep them bright not painted. Can I use brown Interlux seam compound on the seams and then varnish over? How about using the pine tar mix the original builders used? The deck is fiberglass over two sheets of 3/8" cedar plywood. Boat was built from 1950 to 1964 using polyester resin not epoxy. When reffing out the deck to cabin side joint seam some glass fibers came out with chunks of very brittle polyester. I am thinking I should brush in Smiths ceps in this joint, then caulk with cotton and then use 3m 101. The other joints above this I am thinking of using cotton and brown seam compound. The cabin sides are beautiful 3/4" english walnut screwed to two sheets of 3/8" cedar ply. They used the thin ply to get the curves of the deck and cabin sides just right. The boat is a modified Atkin Eric w/pilot house. 34'x11'6"x5'6", 12 tons. Deck is painted white!

th 20 grit sand as non skid. Please advise...Alan

Alan:

Interesting boat. I agree with all you mention and I think the brown seam compound would take varnish OK

but I it might be worth an email to Interlux at <http://www.yachtpaint.com/>.

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## CLEANING TEAK 2

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question: What do you treat teakwood with?

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Myron:

There are books written on that topic, but basically it depends on if the teak is inside or outside and on the finish you prefer. Unlike other woods, teak does not need a cover finish to protect it, it has natural oils that do that. So one way to treat it is to do nothing except wash it occasionally and watch it turn a silvery gray. If you want an easy to clean smooth finish, varnish works well. If you want a less shinny finish and a bit more natural simply oil it. It is a very durable wood, the finish you choose is personal taste rather than protective-----gary

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Gary

Mine is gray, but like to give it some color again without sealing it. What type of oil should I use?

Myron

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Myron:

If you want to get the original color back there is a two part teak cleaner that does the trick. West Marine has it as should any marine store. After you clean it use teak oil, also available at marine stores. Thin down the first coat with a little paint thinner.----gary

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CUTLASS BEARING & STUFFING BOX 2

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question: Cutlass bearing vs stuffing box packing? I'm refurbishing an old, 1934, wooden sail boat.It appears that just forward of the prop is an external stuffing box. When I removed the nut the cavity was filled with seven rings of packing material. Is this right?

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Hi;

Normally the stuffing box with the packing is located inside the hull connected to a rubber hose where it enters the hull and there is a cutlass bearing on the outside. However on some older boats they placed it on the outside of the hull where the shaft enters, thus acting as both a stuffing box and a bearing. The only problem with the latter method is that you cannot adjust it when the boat is in the water, which means if it starts leaking you have to go for a swim.-----gary

question: I need to remove a blind cutlass bearing. Is there a special tool for the job or will a slidehammer work. Also I need a name of a company that sells the nessacary press to remove a cutlass from a stand alone strut(able to get to both sides)Thank You Mike

Mike;

Using a slide hammer with some heat applied should work but you won't find an on the shelf special tool for pulling a strut bearing, usually yards fabricate up some sort of puller or they do what I usually do and use a sawsall with a metal blade and split the bearing in 2 places and tap it out. Good luck-----gary

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## **DECK & COACHROOF REPAIRS 23**

Hi,

I tried to check out your mast mate site however my computer would time out in trying to enter the site. I was looking for some advice on replacing/ repairing a section of wooden deck on a Newfoundland schooner. The current deck planks in the section are 1 1/2" x 5 3/8" and are laid directly on top of three transverse deck beams. Any advice you have on plank spacing, guages, staggering of butt ends, caulking, epoxy, and amount of expansion would be appreciated. Also, a friend has mentioned the deck planks should have bevelled sides in order to take the oakum. The current planks do not have bevelled sides. What do you make of this?

Thank you for your time. Any information would be greatly appreciated.

Sincerely,

D. Barron

.Baron;

Sorry about the website, the server is having problems. Since you are replacing part of an existing deck, you should use the same material as you removed and the same dimensions. Make sure the timber used has been air dried and not kiln dried to minimize expansion and contraction. If you must have butt ends, stagger them as much as possible. Your friend was right, the matching plank edges should form a slight V bevel so the caulking can be driven home without pushing through the other side. Before you lay the new planks make sure you put wood plugs in the old fastening holes in the beams. Good luck-----Gary

Gary,

Greetings from Nebraska!

I have a 1967 wooden Starboat, and in the early '90's had the deck replaced with Honduras mahogany. The craftsman did a fairly good job,

however, he use Resorcinal to glue the planks, and I suspect he did it in temperatures reaching in the high 90 range. Subsequently some of the seams have popped open, and while the gaps are very narrow, they must be sealed.

My inclination is to use a mixture of epoxy and mahogany sanding dust to fill and seal the open seams. Perhaps you can advise me as to the wisdom of this method, or suggest something instead. I want to finish the deck bright.

Thanks.

George Syms

Sutton, NE

George;

Considering the problem, I think your inclination is correct. Try to use really fine mahogany saw dust like a belt sander produces. Good luck-----gary

Mr. Wheeler,

I have recently acquired a 19' Lightning sailboat with a teak deck. The hull is fiberglass. The boat had been left out in the elements for 3 years with no covering. The teak deck is solid in most places and the only weak spots are towards the bow. Although the teak does not appear rotted, the deck now has fine ridges instead of a smooth appearance. The ridges run with the grain.

My question is any advice you have on repairing the deck. My initial thought is to wash the deck, sand it smooth, stain it with a teak stain to bring back the color, and then possibly cover it with an epoxy to restore some of the strength. I would appreciate any help that you might be able to offer.

Gavin Duff

Gavin:

I learned to sail on a lightening, great boat. The ridges in the teak are caused by the softer grain weathering away leaving the harder grain standing proud. Whether you sand or not first use a two part teak cleaner, available in marine stores. This will bring the teak's color back to new. If the deck is thick enough, 3/4 to 1in, you can sand out the ridges, if not, leave the ridges. Teak is extremely rot resistant so no finish is necessary except a good salt water wash. If you want to finish it, a good teak oil is preferable, although it will take Varnish. On larger boats where the non skid properties of teak is important, one would not varnish, but on a small boat, if you are not walking on the deck, Varnish is OK. Enjoy your new, old boat.----gary

Dear Gary

Really enjoy your site. I have a Hartly 28' keel boat. The decks and cabin are glass over ply and are severely rotting. It's a pretty boat and I'd like to improve on the original construction if possible. I'm thinking of using planks for the deck instead of ply. What size boards should I use, width and thickness, considering they'll have to be bent to match the curves of the sides? I have read up on steaming timber and am game to give it a try. How do I blend the curved side boards with the straight ones in the centre part of the foredeck without

making the widths too out of proportion? Can you recommend a book on laying decks?

Thanks  
Dan Cater  
Kuala Lumpur, Malaysia

Dan;

Thanks for the compliment on the site. Your old deck rotted because fresh water got between the fiberglass and the plywood. If the ply had been covered with a material that breathed, such as aerbal [a lagging compound] the rot would not have happened. Laying a planked deck is serious business especially if it will be an exposed caulked deck. If however the deck is to be covered you can lay the planks parallel to the centerline rather than bending them in. The only material to use in covering a planked deck is canvas because there is too much movement for a stiff covering like fiberglass. Plywood is the easiest to seal and install. Also, if you lay a planked deck you probably will have to beef up your support structure. I would recommend you go to [www.boatbuilding.com](http://www.boatbuilding.com) and [www.woodenboat.com](http://www.woodenboat.com) and see what books they have. Also considering where you are located I would think there would be local knowledge in all fascists of boatbuilding. If you have further specific questions please feel free to ask. Hope this helps more than confuses you. Good luck-----gary

I have a 28' Owens '68 with teak/ply decks. The previous owner sanded through the teak, revealing the plywood underneath. These spots are cracking and I believe they are a source of seepage. I want to find a way to repair or even replace these sections of deck and seal the entire deck w/o using fiberglass or paint. I also have a forward round hatch made of aluminum which has some severe corrosion and cracks. I need some places to serach for replacement of part or all. Would gratly appreciate any help/directing you can give.

Thanks!

Steve:

Since you don't want to paint or fiberglass your deck I assume you want to keep the teak look. You can see the problem with teak ply, the teak laminate is too thin and is intended more for interior use rather than being exposed to weather. Since your deck space is not that great, you could seal the present plywood surface with fiberglass or aerbal and lay a thin solid {3/8in} teak deck bedded in epoxy over that. As far as sources for your hatch problems, I would go to the yahoo newsgroup on boating and state your questions or the bulletin board and forum at [www.boatbuilding.com](http://www.boatbuilding.com). Remember that a leaky deck, no matter how pretty, can lead to the demise of a good wooden boat. Feel free to ask specific questions as your project progresses.-----good luck-----gary

GOOD MORNING,  
I'LL BE TAKING A 1970 VINTAGE, MARINER SAILBOAT TO SURVEY, AND THE MOST OBVIOUS PROBLEM THAT I NOTICED ON MY INSPECTION WAS ON THE COACHROOF-ROOF. THERE IS AN AREA ABOUT 18" SQUARE THAT THE UNDER-LYING PLYWOOD IS ROTTED. THE CONSTRUCTION IS I BELIEVE 1/2" MARINE PLYWOOD, COVERED WITH ALAYER OF FIBERGLASS.MY QUESTION TO YOU HAS TWO PARTS.

FIRST.....I'LL NEED TO MOVE THE BOAT ALMOST 200 MILES UP THE CHESAPEAKE BAY AND DO NOT HAVE THE TIME NOR RESOURCES TO COMPLETE A FULLREPAIR AT IT'S PRESENT LOCATION. COULD YOU RECOMMEND A METHOD TO PUT A TEMPORARY PATCH/ REPAIR ON THE AFFECTED AREA, AND.....  
SECOND..ANY INSIGHT ON A PROCEDURE FOR A PERMANENT REPAIR OF THIS AREA?  
THANK YOU,  
BILL DAVIS

Bill:

Yes, the boat has the consummate problem when moisture gets in between the glass and the plywood. For a temporary safety fix I would cut out a piece of 1/4 to 3/8 ply considerably larger than the rot area and put it over the top of the damaged area fastening it down into good wood with sheetrock screws. A permanent fix is much more difficult depending on the location and the amount of camber of the roof. The problem is that any small patch will not have the same camber as the existing roof so will stand out like a sore thumb. Plus it most likely there are other areas with problems as well, so you may need to replace the whole coachroof. If you do patch it you would have to go all the way from one side of the roof to the other and probably have to add another beam next to an original to avoid any seam showing through. If you do the whole roof I would recommend not glassing it but rather use a lagging compound with a screen cloth to cover it. The lagging is flexible and will not separate from the wood as the glass ultimately will. Good luck, the Mariner is a nice boat but I have seen many with the same problem. Feel free to ask further questions-----gary

THANK YOU FOR YOUR REPLY GARRY. I DON'T WANT TO SEEM STUPID, BUT WHAT IS A "LAGGING COMPOUND", THAT YOU RECOMMENDED USING IN PLACE OF FIBERGLASS?  
THANK YOU, BILL

Bill;

Not a stupid question at all, I should have explained. Lagging compound is a liquid, kind of like Elmer's glue, that is used in the heating industry to saturate the cloth used for insulating heating pipes. Years ago a brand name called aerbol was found to work great, with a screen cloth for reinforcement, on boat decks and cabin tops. It acts like a glue, dries in 20 minutes so you can get several coats on in one day and is water-soluble for easy cleanup. It is fully waterproof once painted, and is easy to repair if necessary. I have used it for years and have revisited boats I did 10 to 15 years ago and it is still fine. Most of the Monterey fishing boats in San Francisco are held together with the stuff. It is available through heating supply outlets. You must add some anti mold agent to it but it sure beats messing around with resins and acetone.-----gary

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Hi,

I have a 14' Glassmaster. The boat is in good shape except for the deck which is rotten in several places. I want to repace the entire deck, but I have never taken on a project like this before. What is the best way to accomplish the repair? How about using marine plywood? A local repair shop said to just cover the deck with a regular piece of plywood and carpet, but I do not want to do that. I want the job done right and not just covering up the bad!

Thank you for your time to this matter.

Larry

Larry;

I commend your desire to do the job right. Never use carpet around boats, it holds moisture and creates rot quickly. You are right to suggest using marine ply for the way it is constructed i.e. solid wood cores plus no voids and more layers. If you can use the old deck for a pattern and often it is better to use 2 layers of glued in place thin plywood with overlapping joints rather than one thick piece. It is not a hard job, just take your time and ask a lot of questions. Good luck-----gary

Have had this all wood lapstrake boat for 14 years. It has a split tilt trailer in excellent condition, totally rehabbed. On two occasions during this period I have rehabbed the boat. Sanded it down to bare wood, stained & polyurethaned the deck, dash, windshield frames, interior, scraped, stained and epoxy sealed inside the boat bottom under the floor boards. This last go around, I decided to replace the deck, dash, instruments, wiring, steering wheel, steering cables and strengthen the inside transom by digging out areas of dry rot and epoxy filling. Deck (with Hatch) covered, up to the split windshield. The deck presently has two 4X8 cut, shaped & stained 3/8" marine furr plywood panels about to be adhered to the superstructure perimeter hardwood and supporting deck frame. I am an Epoxy (west System) user and feel that the short setting time available may be too tight for my needs unless I have a few helpers to simultaneously mix chemicals, hardeners and microfibre in order to have ample time to spread as adhesive and clamp within the short hardening time.

I purchased a product called "Titebond" and used it to adhere a new hatch cover. This product seems unsatisfactory to me as it produces a foamy bond and was messy to finish. It left a sponge appearance effect between the bonding. I would hate to have that fill-in & cleanup on the deck panels. Screws will go in from the underside of the perimeter superstructure, through the deck into topside ribs, after the glueing phase.

There is also a question with the 1962 75HP Johnson outboard motor. It has provided up to 28 MPH performance at a recent season startup test. Only one side of the engine fires (2 cylinders). The right side two cylinders do not receive spark off the magneto. I have exchanged & replaced the plugs, still only one side receives spark. HELP!!!

Am turning 68 and can't afford this hobby, anticipate selling as soon as I complete the rehab.

Kris:

Thanks for the more thorough description. For your deck gluing I would use Weldwood Resorcinal[sp], it was the waterproof glue of choice before epoxy. It has an 8 hour potlife but does require tight fits of the to be glued surfaces. It should be available in most hardware stores. As far as your engine is concerned,

unfortunately I have little expertise, but I would check the points and the plug wires to that side of the engine. Sounds like it's shorting out. Good luck, at 68 maybe you can't afford not to have this hobby, true for me anyway-----gary

question: GARY I AM REPLACING THE DECK AND STRINGERS IN A FIBERGLASS BOAT AND I AM NOT SURE OF THE TYPE OF PLYWOOD TO USE,ALL OF THE PLY WILL BE GLASSED OR EPOXYED.SOME YARDS SAY USE TREATED PLY ,SOME SAY USE ONLY MARINE PLY,AND OTHERS SAY DO NOT USE ANY PLY MADE OF PINE BECAUSE THE EPOXY WILL NOT STAY ON THE PINE .NEED SOME ADVICE
THANKS FOR YOUR HELP
JACK COLSON

Hi,
Yes, this is a quandary and, as with all advice concerning boats, opinions are wide and varied. Basically all plywood's now use waterproof glue, so that is not an issue. Marine ply is most preferable because it has 7 laminations wherein the regular stuff has 4 and each laminate is solid wood wherein the others use fillers. So from a strength standpoint, marine is much better. But if that is not an issue and your pocketbook is, plus you are going to glass it, regular ply is fine. I have never heard such a statement about pine but have never come across pine ply. To be safe ask for fir ply. Since you are doing a deck and if there are extreme curves involved consider using 2 layers of thin ply rather than one layer of the finished dimension. Good luck-----gary

I live in alaska, I am considering purchasing a 25' trojan fiberglass over wood crusier. It has teak decking that needs work. I would like to make it look decent, and leak free. It has been covered by some type of thick paint of some kind in the past. Money and time is the problem. I dont care if the teak is beautiful or not, in Alaska wood is a premium. I just want a safe secure comfortable boat for the family that looks neat and serviceable. What do you think?

Jim & Sheila:

I think the boat has had a deck leak problem for quite awhile and the previous owner tried to rectify it by applying a thick coat of paint. Teak decks put over plywood and Fiberglas are damn near impossible to stop leaking once they start. Usually all the teak has to be stripped off and the deck refiberglassed. The real problem might be the hidden deck rot caused by the leaking. I think you should look for another boat or, if your heart is set on this one, get a pro to go over it closely. I wish I had better news, Good luck-----gary

Hi Gary, thanks for the quick reply, i have heard back from my sister-in-law and i will repeat what she said, The teak strips are laid over the fibreglass with the normal black caulking between. It is screwed down as opposed to glued which means that some of the screws are now visible and we don't want to re-bed them as it will cause more leaking problems. At the moment, leaking is minimal through the deck, just a couple of tiny spots. We are really looking for information concerning the care of the teak. AT the moment we wash it down with salt water to keep the oils there and have oiled the deck but its due for a light sanding before oiling again.

We don;t want to varnish it as that would be a never ending nightmare to keep up.

So basically, we are looking for info on how to get it in good shape and then a maintenance program to keep it up with some of the screws heads showing, but have to seal somehow to ensure they don't leak. In closing the decks are not in bad shape and show no signs of lifting of retaining water underneath, we just want to make sure we know how to maintain its good looks.....Gary if you would like to E mail my sister-in-law Maureen is her name and her E mail address is Maureen@steelstudio.co.za just put a attachment for me as i am interested also with the outcome. In closing thanks again for talking the time to answer regards Bill Crompton

Bill:

That helps. The biggest problems with teak decks laid over fiberglass and screwed down is that the teak is only 3/8 to 1/2 inch thick which does not give a whole lot of room for wear. So you end up over time with the screw holes loosing their wood plugs, exposing the screw head and eventually leaking. If there is enough thickness left you can pull the screw, redrill the hole with a bung countersink and bed, screw and replug the hole. A pain in the butt, but it works. If there is not enough meat left to rescrew and there are not too many screws that need replacing, I have pulled the screws, plugged the hole with a dowel and epoxy and redrilled for the plug only. Also if the caulking in the seams is loose, you have to remove it and replace it with a product specifically designed for that purpose, Detcko and 3M have suitable products. Tape both sides of the seam before recaulking and pull the tape like so > before the caulk sets.

There have been many articles written about this type of deck problem, the consensus being the only real fix is to pull the deck and resurface the glass or, if your wealthy, replace the teak. A very quick fix, if you do not mind loosing the wood look, is to paint the teak. The paint fills the tiny leak areas.

As far as proper maintenance of the teak, what you are doing is the right way to go. If you want to get a diversity of opinions on this problem ask your question to the forum at www.cruisingworld.com--- CW/SW General Messages Board - Message Index . You will get an ear full---hope this helps and feel free to ask more questions-----gary

question: What a great site for the project I'm undertaking!

I've begun a deck repair on a 1975 Hans Christian sailboat. The deck was constructed of a substrate of 3/4" plywood nailed to 2x2 crossmembers, covered by a layer of fiberglass, topped off with a beautiful teak deck. The integrity of the deck long compromised, the plywood substrate has rotted in significant portions(especially side decks at chainplates and fuel/water fill ports) and delaminated from the glass. Small sections of the deck still seem sound; I have removed the teak(not to be replaced for now\$\$\$\$) and have a much better idea of just how much of the deck is shot. Is it reasonable to think I can cut out the bad sections, down to the 2x2s, replace it with new plywood, fill all the old screw holes with CPE/gitrot/resin, and cover the entire surface with a new glass top? Are there structural integrity issues that I'm not considering? I'm afraid the coachhouse is not far behind.

The boat has been our leaky "house" for the past three years and, of course, have dreams of going places on her someday. However, my wife grows weary of the pots and pans inventory during each rainstorm and our move to the Pentagon/eastcoast present a bigger challenge. Advise when able. Thanks very much; this is my first time at the site and I've learned alot already.

John May

Jim;

Nice boat, but that deck construction popular with most boats built in Taiwan, does not hold up over time do to fresh water getting between the fiberglass and plywood. Your fix is the only way to go but the piecing of the deck will weaken the deck integrity which can only be resolved by putting another layer of 1/2 ply over

the repaired original deck. Also I would not fiberglass the new ply deck for the same reason that rotted it in the first place. Instead I would use a lagging compound over a screen cloth. Lagging compound is similar to Elmer's glue and has flexibility characteristics unlike fiberglass. It is also water based and very easy to work with and becomes watertight when painted, but still lets the wood breathe unlike fiberglass resin. When ready you could put a cosmetic teak deck over it with no worries. I will be glad to walk you through the procedure as needed-----g

Mr Wheeler,

Any solution that doesn't require the use of fiberglass and resin sounds great to me. Everything I do to the boat I'm doing for the first time and the learning curve is steep. As a carpenter's son, I've found wood to be my friend; fiberglass kicks my butt. I've seen some great looking boats that appear to have a canvas deck; that must be the lagging compound and screen cloth you mention. Does that finished surface have its own non skid characteristics or should plan on painting in some grit (read the salt and coffee can shaker method from another question)? I sure do like the idea of being able to put teak back on later when I'm more financially able.

I'm getting way ahead of myself. I will definitely need you to walk me through it. For now, it sounds as though I'm on the right track: get the teak off, cut away the glass over the rotted subdeck, and cut out the rotted plywood. Should I cut away portions of the deck where the fiberglass and wood still seem sound? Can I get the desired result, a strong-watertight seal, without removing the substantial cap rails/bulwarks? I've already removed the bowsprit and boomkin to get the teak off but am reluctant to tear off the beautiful teak rails. Thanks for the help. I'm researching a supplier for lagging compound and cloth in the Annapolis area; the boats in the Navy yard there.

Jim;

The lagging compound and screen cloth are quite different from canvas and paint. The lagging actually sticks to the deck like glue and the screen cloth acts as a reinforcer whereas a canvas deck sort of floats and is bedded in paint. Lagging is usually used by roofers and plumbers but years ago was discovered to work great on boats. Half the fishing fleet boat in SF are held together with it and memory. There was a commercial product called Aerbol which was a lagging sold just for this purpose. I think they are out of business but I have also found the lagging and the cloth in art supply houses and occasionally in Marine stores. There are 2 kinds of cloth, one is like a screen with a bonded weave such that it won't adapt to compound curves and the other is called yellow jacket and has a nonbonded weave so it will lay down on any compound shape. You need a non skid for the last coat and a bit later I'll tell you how to use Epson salts to get the best nonskid there is.

If the rot does not protrude under your rails you will not have to remove them, if it was a wood boat you would. However after you put the new plywood down you may have to add a molding to seal the joint between the new ply and the rail.

I wouldn't cut out any of the old deck that is sound but definitely strip off any glass that isn't well bonded. Quite a project but well worth the effort. I hope your wife's patience runs deep-----g

question: Hi Gary

My name is Derek Pauly, I am building a deck house on my boat. I would like to know the right deck camber I have heard the standard practice is 1/2 inch of camber for every foot, but 5/8 or 3/4 per foot looks better. The boat will one day look like a Maine lobster boat. The pictures I have seen suggest a flatter rather than more curved beam.

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Derek

Let your good eye make the choice, any camber will shed water but there is only one that will look sweet-----send me a PIC when you're finished-----g

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question: Hello Gary, I have teak decks that have lifted, they were not screwed in just glued to fiberglass, what would be the best adhesive to reglue, and do I have to remove the entire effected plank, or just reglue at the end where it is lifting

.

Hi:

I would use a thickened epoxy glue and because both surfaces must be cleaned of old stuff, you don't have much choice in pulling up the whole plank. Unfortunately down the road you will have to make a decision about either pulling the whole deck and redoing it in wood or leave the glass surface. If there is enough thickness in the wood, 1/2 in, you could screw it down and wood plug the holes, but most of those glued laid decks were only 3/8 in or thinner.-----good luck----gary

Thank you for the info, I will remove caulking and try to pry the whole plank up. Will west systems work, and what do I thicken it with?

Another thought. If most of the plank is still secure you could chisel a joint and just reglue the loose part and caulk the new joint. I say this because you may end up splitting the plank in trying to lift it. West system is fine and sells a thickener but in a "pinch" you can use flour.-----g

I will try that first, I will use a heat gun to dry the surfaces, it is at the end of the strip where the three planks buckled. If I carefully lift the planks I may be able to lightly sand. I will clean with alcohol, and reglue, I was thinking sika flex or 5200 would work for the patch, but if you think epoxy will be better I will go that route. Then I will recalk. Does that sound good?

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Yes, but clean the wood with acetone, it cleans off some of the natural oils in the teak which interfere with adhesion. Not sikaflex but 5200 could be used instead of epoxy but just for a small area. Put some weight on the plank as the adhesive cures.---g

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we have a 1962 lyman 24 ft. & want to replace the deck could we safely use PlasTeak sheets for this ??

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I don't know that product but by the name it sounds like some form of plastic. These products are usually just intended for indoor use because they break down in the UV rays of the sun and don't stand up well to temperature change. Mahogany or teak marine ply is your best bet-----gary

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question: LOOKS LIKE I will have to take up teak decking to repair ply topside which is needing fixing. how does one get the first bit of teak up to remove all of it.

regards, harry.

Harry:

Hopefully the teak is not bedded down in 3M 5200 or some other polysulfide. You'll have to pull out the screw fasteners and possibly split out one piece with a chisel so you can get under the teak to wedge it up. Rarely have I seen this job done in such a way that the teak taken up is reusable. You may have to settle for a good plywood deck covered with dynel or aerbol unless you have a bucket full of bucks and can afford new teak. Good luck and I hope I am wrong and the teak comes up without a problem and is reusable-----g

question: Hi Gary, I have sheeted up my ply wood built cruiser I've recently purchased so as to repair the decking throughout the winter.

The deck looks like a teak planked effect with caulking between planks, although I think it is a laminated ply. The problem I have is that it has a couple of soft spots and also allows rainwater to penetrate through inside. I have thought of laying ply over the whole deck and covering with a layer of fibreglass & gritted gel coat (for grip) to ensure it doesn't leak again, does this sound an effective budget repair or could you suggest an alternative please, Regards Rob

Bob;

Sounds basically OK but I would want to know more about the deck construction before putting another layer over what is there. Is it teak planked or is it teak strips over plywood or is it teak veneer planked plywood only. Plus if there is any rot you want to fix that before you cover it over. Also if you put on more ply, one usually puts on 2 thin layers, staggering the joints, rather than one thick layer. Plus, I would be cautious in fiber glassing over whatever you do for, although perfectly done a glassed over deck can last a long time, but, in my experience water, one way or another, gets in between the glass and the wood and extensive rot results. I prefer using a lagging compound. Lagging compound is a liquid, kind of like Elmer's glue, that is used in the heating industry to saturate the cloth used for insulating heating pipes. Years ago a brand name called aerbol was found to work great, with a screen cloth for reinforcement, on boat decks and cabin tops. It acts like a glue, dries in 20 minutes so you can get several coats on in one day and is water-soluble for easy cleanup. It is fully waterproof once painted, and is easy to repair if necessary. I have used it for years and have revisited boats I did 10 to 15 years ago and it is still fine. Most of the Monterey fishing boats in San Francisco are held together with the stuff. It is available through heating supply outlets. You must add some anti mold agent to it but it sure beats messing around with resins and acetone. Get back to me when you have a little more info about the exact nature of how the existing deck is constructed-----gary

hi again Gary, this is the cruiser with the deck letting rain water through. I am sending some pictures of the decking to you next.

The message is ready to be sent with the following file or link attachments:

Boat Pictures 069.jpg

Bob;

The pics help some and from what I can see or not see, no sign of wood plugs covering fastenings, the Teak is not ply but rather strips glued, possibly fastened, to an under ply deck. If there is not extensive rot in the underply which would require the teaks removal for repair, your idea of a ply cover over is OK. What I have done in the past for a dirt cheap repair, is to cover over the teak with the lagging compound and cloth painted over with a good deck paint. You could try this first and if it didn't work you would at least have a good surface to cover over with new ply. The problem being to do a truly top notch job all the deck hardware and stanchion have to come off, the teak deck removed, any rot repaired, and a new ply deck over that. But, since you are not dealing with a valuable classic, whatever works and doesn't contribute to shortening the boats life, is AOK. After all, we are just stewards. You'll have a good time with this boat-----gary

question: Hi! We have purchased a 1979 Formosa 41. Her wooden missum mast is in need of some rot repair. Can you give us any pointers on this?

We are also restoring the teak deck. Any info that would help would be appreciated.

She is a beauty other than these "little" repairs.

Thank you in advance for your help

Congratulations on your new old boat, nice choice. If the rot in the mizzen is just cosmetic i.e. not deep enough to be considered structural, you can repair it with some epoxy filler after you scrape out the rot and treat the wood with antifreeze to kill any left rot spores. If the damage is extensive you will need to unstep the mast and scarf in some new pieces. As far as the deck is concerned, I would need more info on what the extent of your restoration is going to be and the general condition of the deck and whether or not it is laid over a plywood or cored glass underlayment.-----gary

Teak Deck. the deck is bowed in some areas. but we are able to walk on it and do not feel any "soft" areas. We we thinking about sealing the old holds and then gluing down and adding new stainless steel screws, teak plugs and sealing over with teak oil.

My husband is not the best caulker. So, caulking will be slow going.

We hope to have her back to her old self by May.

Thanks for the pictures, they help. The problem with these decks is that initially they were only about 1/2 inch thick which leaves little room for a plug over a screw head. This also makes refastening difficult and pretty ineffective. Trying to keep these old teak decks in any decent shape over time is damn near impossible and is the reason that many owners opt to remove them. My advise as well. I have tried everything, including using epoxy coated golf tees as combo fastener and plug in one, sorta worked, but eventually most owners, after spending time and money fruitlessly, opt for removal. Check out this article-----<http://www.sailnet.com/collections/articles/index.cfm?articleid=suelar0187>---- Good luck----gary

ps--thanks for relating that you have a mast mate for your work aloft

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## DESIGN 1

Hello,

I am presently in the process of choosing a design for the construction of a boat. I have purchased plans for a Lively 28 trimaran from Clarkcraft. I am planning on ordering their premade frame kit. However, the trimaran doesn't offer the space that I need in a cruising yacht. I have considered building two main hulls and joining them together to form a catamaran. I would like to know if this is feasible and what problems I may run into. Would appreciate it if you could advise me of someone who could look at the plans for the trimaran and tell me what I would need to do to convert it to a catamaran which would give me the room I am looking for. I have looked at plans for catamarans but they are extremely expensive and are larger than I'm looking for. My email address is wolverine619@yahoo.com. Any help or suggestions you could make would be greatly appreciated. I'm hoping to start construction around the first of next year. Plan on building in marine plywood. Thanks for your time.

Steve Rose

Steve:

Your question is a little too complex for me, you need a naval architect. But, that said, it seems to me to build 2 hulls designed for a trimaran and join them to make a catamaran is not a good way to go. Everything would have to be changed. Your money would be better spent having a designer design what you want and build it from scratch rather than getting a kit that doesn't fit your needs. You should take your quandary to Macnaughton who is a designer [macnaughtongroup.com](http://macnaughtongroup.com) home page yacht design marine publishing liveboard catalog. Good luck---gary

Hi again Gary, sorry to pester you again, I have been up to the boat again today with another sheet to fully enclose the whole decking area to allow it to totally dry out while we come up with a solution before attacking it. Obviously the boat has to be repaired properly but I am looking for the easiest & cost effective way of doing it as I am not skilled with wood but love boats. After your reply this morning I sent some photos to you to show some of the problem. On closer inspection of the deck today under the sheets already covering her, it feels now like a thin layer of teak planking over ply, as you can feel in

places where it is separating.If you look up under the deck inside the cabin it doesn` t seem to be planked,so I would think it is laminated or thin planks on top of ply. As I am in the U.K. It is very cold & wet outside at the moment to work on so we thought the best way was to dry her out for now & remove all deck fittings to give a clear run at it when I know what to do.

Regards Rob, by the way Happy New Year to you & yours.I Look forward to your advice

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DORY BUILDING 1

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I would like to find plans for building a dory. Thanks, Richard Proos

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Richard;

There are many resources for dory plans depending on the type and the construction method. I would go to www.boatbuiding.com also Bolger Designs (www.ace.net.au/schooner/sites2.htm). Check out Bolgers Gloucester Dory, great boat, easy to build. Good luck, a very worthy project. Feel free to ask questions during construction.-----gary

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Ducks 1

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I've looked high and low for some "ducks". The lead weights used in lofting.

I know shipping these through the mail would cost more than it's worth...if

I could find them.....but a mold would do also. Any ideas on this subject?

Thanks Alden Seattle, WA

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Alden:

Sorry, no idea.I would make my own with a sand mold and a bunch of melted down tire balancing weights available at junk yards. If you want a definitive answer, ask your question at the boatbuilders forum at www.boatbuilding.com. Good luck-----gary

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## ELECTROLYSIS 2

question: Dear Boat wright

in my wooden Voyager Yacht at the back of the longitudinal stringers ie those running over the ribs fore and aft there is a fair amount of soft furry wood especially around the engine area. I can feel it but not easily see it. I have got a rasp in and removed a fair amount of it. I have applied a two pack epoxy preservative Is this wood rot and am I doing the right thing.

Thanks

Tony Jones

Tony;

As long as the damage is not extensive enough to cause structural problems, your fix is a good one. Usually that furry type deterioration is not wood rot fungus but rather electrolysis. It is typically found around metal through hull fittings or engine areas touching the wood (shaft log). It can also occur around electrical wiring or appliances using electricity or near the batteries themselves. The damage will continue unless the problem is found. The deterioration itself is caused by the wood cell structure being damaged by electric current-----gary

Thanks

Gary very interesting I really appreciate your reply

Is some sort of anode an option? can an electrician isolate the problem? It is worse under the battery boxes now that you mention it. Thanks again great response

Have a great Xmas

Kind regards

Tony

Tony;

Great looking sea boat, I'm jealous. This electrolysis is usually do to improper grounding. Basically current is getting into the wood and if the damage is not around a metal fitting that is exposed to salt water, then it is coming from the internal electrical system leaking current. Best way is to find a marine electrician and have them track it down. Sacrificial anodes only apply to the electrolysis resulting from different metals in salt water, they attract this current. The zinc on your shaft is such an anode. But for an electrical system leak, you must track it down and correct the problem-----g

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EPOXY PROBLEM 3

question: I am attempting rejoin some Port Orford cedar. The stern of the boat was pulled out on the starboard quarter.

I have replaced all 5/8 with 3/4 and 1 by 2 studs with the trim replaced with 1 by 12 cedar.

The problem is that i had to reuse the original 3/4 Transom and have been using west system two part expoy and

of course splash zone and 5200 on the joints. The transom is leaking fuild as we speak. Epoxy and water, there

is no water in the boat" it sits in the driveway much to my wifes displsure"

It has been out the water for 1 1/2 weeks. I know where the expoy is coming from, but the water? No sign of rot anywhere.

What is the best expoy for cedar.

Hi;

I am afraid the basic problem is the epoxy itself. When there is a lot of expansion and shrinkage of the wood do to in and out of the water use, you must use flexible compounds in the seams and other joint areas. I would guess the epoxy bond was broken and water was let in. This is a no easy fix situation. You either live with it and bribe your wife with flowers, or pull the outside transom boards, clean out the epoxy and rebed them in a proper flexible bedding compound. Cedar being a fairly soft wood expands and contracts a great deal. If you redo the transom boards I would suggest using mohogony or teak for they are more stable. The best epoxy to use in my opinion is no epoxy, but if you want epoxy information go to www.rotdoctor.com. Hope this helps-----good luck-----gary

question: I am trying to figure out the best method of finishing the bottom of a 1960 Chris Craft ski boat. I have been told by some to epoxy the bottom inside and out, others have told me the wood will not breath--I am confused and would like your opinion. Thank you, Ron Hilton

Ron;

How you treat the bottom depends on how it was constructed. If the bottom is planks, either butted [carvel] or lapping {lapstrake or clinker}, you should not epoxy it for the wood needs to freely expand and contract. If however the bottom is plywood there is no expansion or contraction so you can epoxy and or fiberglass it. Epoxy alone does not offer much more protection than a good oil based paint. Good luck-----gary

question: Hi Gary, I own a 1929 28' Triple Cockpit Chris Craft Speed Boat, She has been out of the water for Seven years now in Dry Storage in my barn, She has spent her life in Salt Water, She Still wears all her varnish. I would like to Take off some old bottom paint build up and perhaps coat her in CPES, Prior to recaulking, I have read great things about this product in the Grand Banks forum, will this product allow the wood to swell up as she always has? I understand this product if Applied correctly strengthens the wood but does not fully harden. I Want to Launch in Fresh water this year, but I don't wont to Soak her Dry hull in Fresh water.

Cheers

Rev. Bob

Rev. Bob:

You are a blessed man, pun intended, that is a great boat. Traditional built boats need traditional care. They didn't have epoxy in 1929 and I don't think they would have used it on their plank boats if they had. It does not let the water penetrate, as does paint. So you planks won't swell properly especially considering how much they must swell after 6yrs dry. Also, before you recaulk, if the seam gaps are huge, I would wet down some burlap or similar absorbent material and tack it to the bottom. Continue to wet it down for a week or so. When using the boat in fresh water Keep a block of salt in your bilge. Prevents rot.

Here's a caulking tip. If you are doing a lot of seams, here's a trick I learned. Get some empty caulking tubes and mix your seam compound with a little paint, oil based for topsides or bottom paint for bottom seams and mix it to a caulking consistency. When filling the caulking tubes hold a high speed vibrating sander to the side of the tube. This gets all the trapped air out. I would highly recommend taping both sides of your seams, it's a pain in the ass but not as much of a pain as trying to clean up the excess caulking from around the seam. As you put the caulking in follow with a putty knife and pull your tape before the seam compound dries. Pull you tape like so >. Hope this helps, good luck-----gary

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