

## Alwest 370 Teak Decks

Article by Rob Farrow ([rob.farrow@sympatico.ca](mailto:rob.farrow@sympatico.ca)) based on the 2004/2005 addition of teak decks to the 1972 Alwest 370, "Catherine Ann".

Teak Decks on a House Cruiser ???? Who would do that ????



We have owned "Catherine Ann" for over 13 years and she has progressed well into the "over improved" category, but . . . . she continues to be my main hobby ☺ . . .

If you are tired of replacing outdoor carpeting every few years, this is one alternative to consider . . . . .

14 years ago, we rescued this boat from a yard in Keswick and began a restoration journey that continues today. The cabin roof (amongst many other things) was in rough shape and one of the first orders of business was to keep the rainwater on the outside. (picture taken in 1994)



10 years later, I was removing the 2<sup>nd</sup> round of “promised to last for ever” outdoor carpet with a router, because it was too deteriorated to pull off and the glue would gum up any kind of sanding device . . . . .



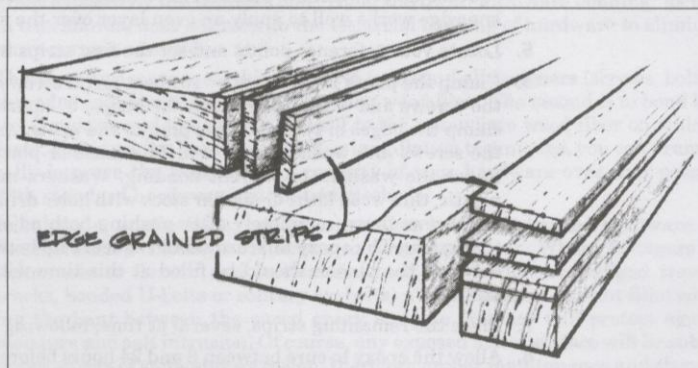
About that time, I happened to find the following article from West System Epoxy ([www.westepoxy.com](http://www.westepoxy.com)) and through discussion with their technical advisors, decided that not only would this work on a plywood substructure, but it could also work on an aluminum substrate.

## 6.5 Installing a teak veneer deck

Thin strips of teak bedded in a thick epoxy/graphite layer give you an authentic teak deck that is both durable and low in maintenance. Although strips of up to 1/4" thickness may be used, the effects of dimensional change can be limited by using thinner, 1/8"-thick strips. A 1/8"-thick deck will provide you with years of service in high-traffic areas, and it will keep the additional weight of a new teak deck to a minimum. Strips should be between 1-1/2" and 2" wide, with edges planed smooth and straight. Leave the flat surfaces (top and bottom) rough sawn. The rough texture left by the saw improves the bonding characteristics of the strip. The remaining marks on the exposed surfaces will be sanded smooth after the new deck has been laid.

If you plan to mill your own stock, select a plank width that makes the most

**Figure 6-22** Thin edge-grained strips provide an even wearing, attractive and dimensionally stable deck.



efficient use of the raw stock. Teak is generally available in 2"-thick, rough-sawn planks; you should get close to a 1-3/4" finished dimension from these planks. Saw the stock so that the strips will be edge-grained (Figure 6-23). This will minimize expansion and contraction of the wood and make a more attractive, even-wearing surface than will slab-grained strips. Moisture content should be between 6% and 10%. Install a teak deck as follows:

1. Plan the pattern for the layout of the teak strips. Place the first teak strips in the desired location and then mark reference location points on the strips and on the deck.
2. Abrade any smooth bonding surfaces with 50-grit sandpaper and remove sanding dust. Wipe the planks with paper towels saturated with acetone or lacquer thinner 30 minutes before bonding.



## 59 Hull and Deck Planking Repairs

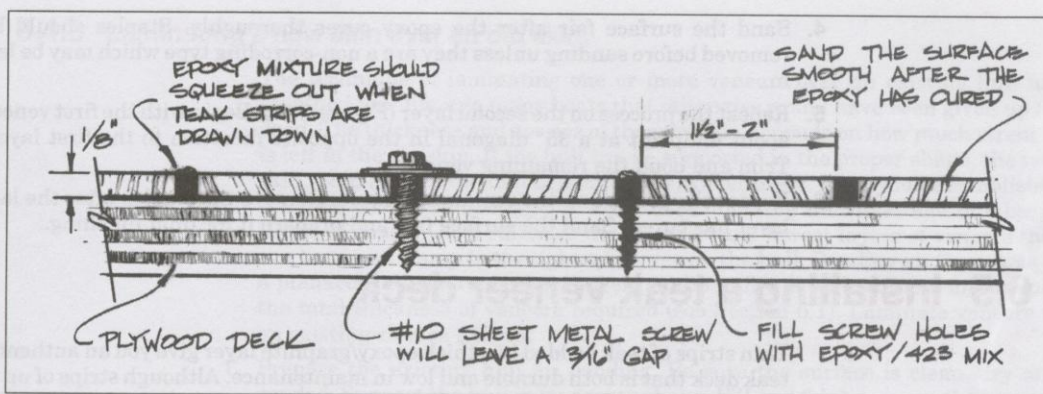
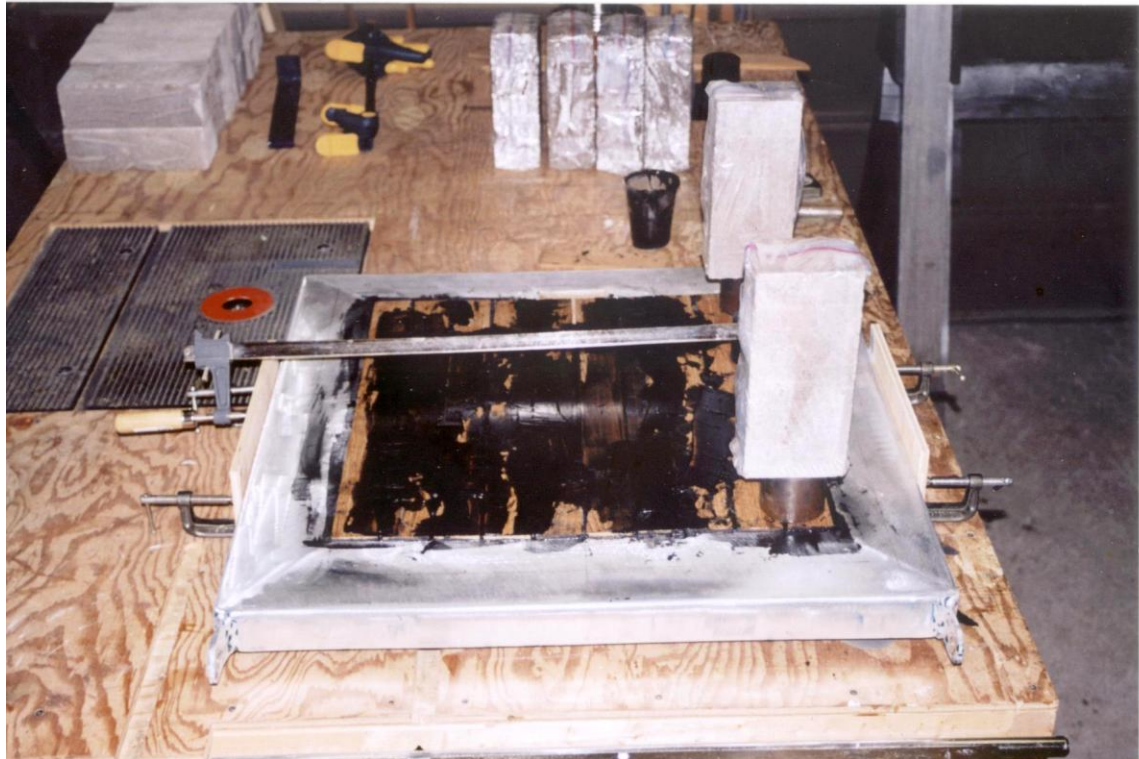


Figure 6-23 Sheet metal screws with large washers will clamp the strips in position until the epoxy/404/graphite mixture cures thoroughly.

3. Wet out the mating surface of the first few pieces of teak and the deck in the area of the first few strips with unthickened resin/hardener.
4. Apply a thickened epoxy mixture over the wet-out deck surface. Use 404 High-density filler (thickened to catsup-mayonnaise consistency depending on deck fairness) and add just enough 423 Graphite Powder to turn the mixture to an opaque black color. Apply a layer just thick enough to span any gaps and to squeeze up between the planks. A notched 809 Plastic Spreader with cut along one edge works well to apply an even layer over the substrate.
5. Locate your reference points and set the first strips in place.
6. Clamp the plank in place with #10 sheet metal screws and large washers. Place the screws and washers between the strips, 8" apart. Each row of screws will clamp the edges of two adjoining planks and act as spacers (Figure 6-24). Coat the screws and washers with a mold release or place a small sheet of plastic under the washers to prevent bonding. Washers may also be cut from stiff plastic, thin wood lathe or similar stock with holes drilled for the screws. Tighten the screws down completely after pushing both adjoining strips tight against the screws. The epoxy mixture should squeeze up between the strips. Any voids between the planks should be filled at this time with the epoxy/404/graphite mixture.
7. Place the remaining strips, several at a time, following the same procedure.
8. Allow the epoxy to cure between 8 and 24 hours before removing the screws and washers. If you wait any longer than this, it will become much harder to break the screws free. Tighten the screw slightly (5°) before backing it out. If you have difficulty removing a screw, heat the head with a soldering gun's cutter tip. While the screw is still hot, try to unscrew it again. Repeat until you are successful.
9. Fill the screw holes with epoxy/404/graphite mixture. A syringe loaded with the mixture will speed the process.
10. Sand the surface with a reciprocating sander and 50-grit sandpaper to level the epoxy and teak surfaces. Sand until the saw marks are removed from the teak surface. Fine sand with 80-grit sandpaper, and then finish with 120-grit. The teak surface may be left natural or finished with a marine-grade teak oil.

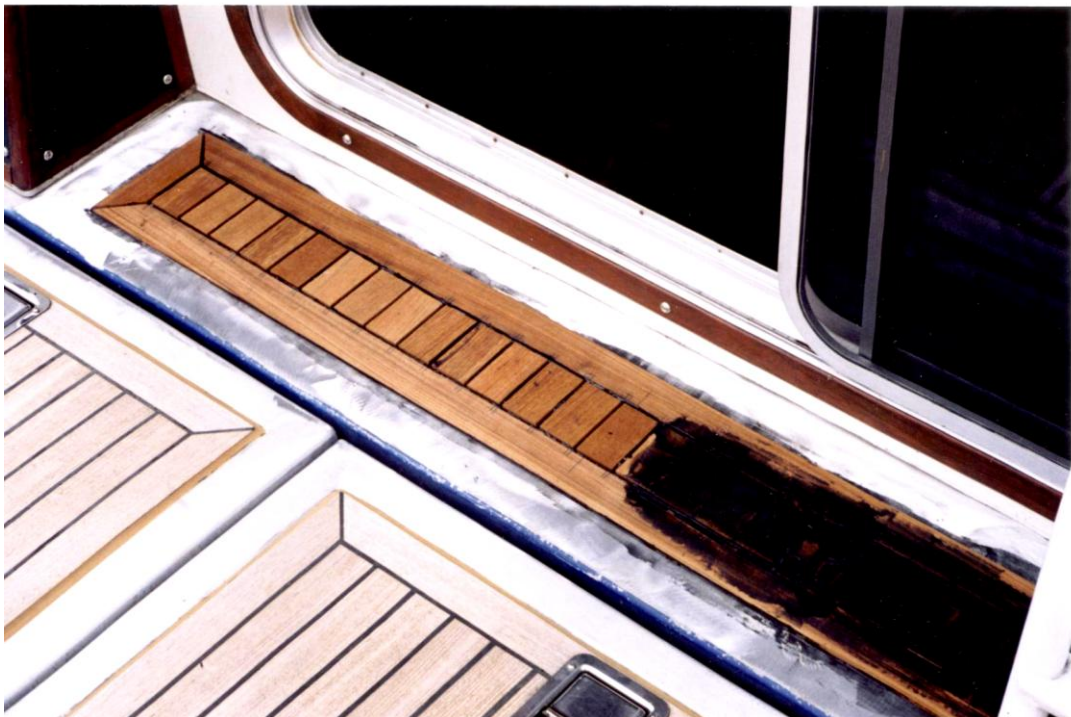
Note: If planks thicker than 1/8" are used, do not fill between the planks with thickened epoxy. Instead, remove squeezed-out epoxy between planks and allow to cure. Remove the screws and washers and sand the top surface of the planks fair. Fill the joints with Thiokol or polysulfide caulk.

I was not about to insert any screw holes into either my cabin roof structure or my aluminum decks, (as suggested in the West article) so another plan was needed. My entire installation was done with bar clamps to control the crosswise bow of the wood strips, 3/16" plastic spacers (used with ceramic tile) to control spacing and many bricks (which I just happened to have) wrapped in plastic so they would not stick to the epoxy, to hold the strips in position until the epoxy cured.



West recommended etching the aluminum to improve the epoxy bond. I was concerned about being able to remove all of the acid from the seams and weld beads and thus opted not to do this. It is very important to coarse grind the surface of the aluminum just before the epoxy is applied. I have found that the epoxy bonds very well to freshly cleaned aluminum which is above 15° C. Below this temperature or forgetting to grind off the aluminum oxide will cause bonding problems. The following pictures show the installation sequence across the deck area aft of the cabin structure.





In some areas additional preparation was required. Anywhere that water would stand previously (ie the last areas of the old carpet to dry) needed to be faired so that they would drain properly. There were a couple of low spots (about 1/4" maximum depth) on the front deck.



The side decks need special treatment as well. One of the drawbacks to the Alwest design is that the extrusions used for the gunwales do not allow any drain openings, thus there was often water standing on the side decks if the boat was low in the bow for any reason. I installed two deck drains on each side deck and used epoxy filler to create slightly domed sections for the teak. Thus the centre of each teak area is about 1/4" higher than the outside edges, causing it to drain and dry quickly.





This was a “fun” project, and the results are durable and look good . . .  
but it took two seasons to complete what I thought would be a 2 month project.

Teak is many times more expensive than any other wood and it is brutal on cutting tools. I spent several hundred dollars on band saw blades, planer blades and sanding belts for this project.





I have tried several different teak oils, but oils tend to blacken the teak in our climate. The best solution so far seems to be a light power washing a couple of times a year. I have been told that occasionally washing the decks with salt water will keep them “teak gray” as opposed to going black. I have yet to try this.

But . . . . when you add summer and friends (and dogs) it is a nice place to be . . .

