



Choose Carefully, SELECTING A SURVEYOR

Story and Photography By STEVE C. D'ANTONIO

It's an unfortunate but all too familiar scenario. A couple arrives at my boatyard with a boat they've recently purchased—often used, but sometimes new. It's their proverbial dream boat; they've done their homework, often having searched for months or years to find just the right model, year, or version. With the survey out of the way and sales contract signed, they head for the boatyard with a laundry list of items to be installed, modified, or repaired in preparation for their cruising escape.

This list often includes such items as a new chart plotter and radar, water-maker, dinghy hoist, fuel polishing system, satellite television, new galley range and microwave, gelcoat or paint repairs, a flat screen TV, and so on. Many folks also request our proprietary three-part inspection program, which includes a careful review of the engines and genset, the AC and DC electrical system, and "other systems"—all remaining permanently installed gear and equipment, such as plumbing and seacocks, tankage, fuel system, steering, and other accessories.

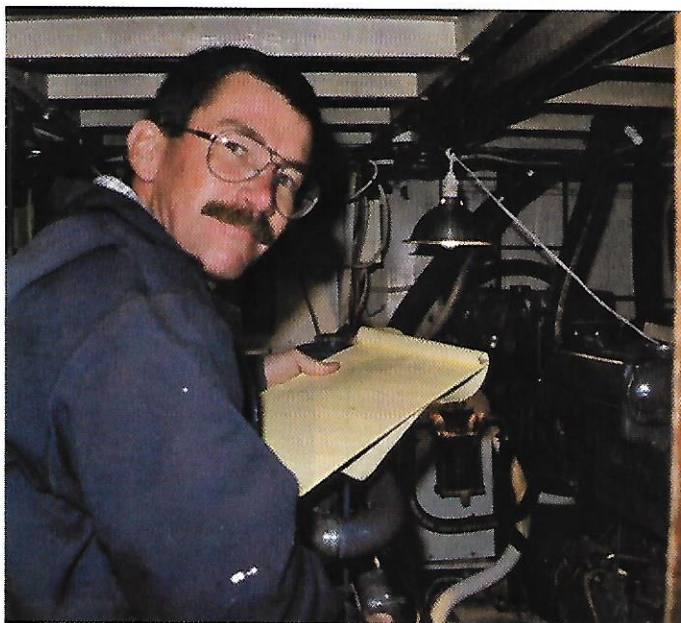
Regrettably, the yard's inspection program reveals a host—sometimes numbering in the hundreds—of flaws, defects, safety concerns, and necessary repairs. The budget that had been allocated for the special projects is now quickly consumed by necessary repairs and corrections.

On hearing this sad news, invariably the owners say, "How could this be? We had the boat surveyed and it passed!" Having been the messenger of this glum report on far too many occasions has compelled

me to pen the following guidelines on surveys and surveyors for the would-be boat buyer. I'll attempt to guide the reader through the process of selecting a surveyor and determining what one should and should not expect from a survey and surveyor.

FULL DISCLOSURE

First let me say that the sole intent of this article is to educate *PMM* readers and boat buyers, not to bash surveyors; many are good, honest, competent, and well meaning. (These surveyors know who they are, and so do their



Some surveys simply can't be conducted without getting dirty, particularly on older vessels. Thorough surveys call for an individual who is fit and able to climb into and out of the bilges, lockers, and other poorly accessible areas.



Work Closely



A thorough survey is an integral part of any boat purchase. It doesn't really matter whether she's decades old or showroom new, a survey will alert you to potential problems or costly repairs before you've signed on the dotted line.

satisfied customers.) Others are not. As a boatyard manager, I've had the unique experience of reading scores of surveys and observing dozens of surveyors—the good, the bad, and the ugly—in action.

In my chosen profession, there are many unscrupulous boatbuilders and boatyards, to be sure. Even though I don't count myself among these nefarious or notorious actors, I'm ashamed of their actions nonetheless and incensed by the harm they inflict on the industry as a whole. Likewise, the good surveyors I know and work with are angered

and disgusted by the actions of inept, incompetent, or dishonest colleagues who discredit their trade.

HISTORY

The profession of maritime surveying has a long, storied, and honorable history. Marine or vessel inspectors are mentioned in writings dating from the Greek and Roman empires. In the 17th century, the British Navigation Acts decreed who was qualified to inspect vessels and their cargoes. A search of the archives of Lloyd's of London reveals that Lloyd's



first mention of vessel surveyors came in the late 18th century. It's likely that these first marine surveyors were retired sea captains and shipwrights. Who better to pass judgment on the condition of a vessel than those who built and sailed them to the far corners of the world? Of course, as the insurer of the vessel and its cargo, Lloyd's would have had a stake in this matter. It was in Lloyd's interest to specify the building details or scantlings of vessels, and then classify them according to their condition.

Since WWII, the surveying landscape has changed considerably. With the boom in recreational boating in the past 50 years, the need for small craft yacht surveyors has grown considerably. Today, it doesn't

fellow—he must have weighed in excess of 300 lb.—was a retired police officer. I wondered how he'd crawl through the bilges of a boat to conduct a survey. Another was a retired airline pilot and self-described “boat nut.” He said he was looking for something to occupy his time and thought surveying would be fun and interesting. The third, who was probably the most qualified of the three would-be surveyors, was a 30-something oysterman.

It's unlikely that any of these individuals will become the marine surveying equivalent of naval aviation's “top gun.” Becoming a competent surveyor takes a great deal of effort, experience, and commitment. Indeed, it is difficult for a qualified surveyor to



Top left: Broken fiberglass tabbing is usually indicative of a serious problem or damage that has occurred to a vessel at some time in its life. If it's accessible without major disassembly, this is precisely what you hope your surveyor will find. Bottom left: Most surveyors make it clear that they are not diesel mechanics. A savvy surveyor, however, noted that this vessel had a vibration that was indicative of poor alignment. When the coupling was disconnected, the evidence bore out his suspicion. Left: LP gas installations are among the most challenging where it comes to ABYC compliance. You should make it clear to your surveyor, however, that you want all violations noted.

require a royal decree to become a small craft surveyor. In fact, it doesn't take much at all to hang a surveyor's shingle, and there's no industry or government-mandated accreditation or licensing system. Business cards, stationery, embroidered polo shirts, and a website will go a long way toward establishing credibility for the uninitiated customer.

A few years ago, I attended a multiday seminar on the subject of wooden boat surveying. During the first lunch break, I was anxious to get to know my fellow wooden boat aficionados. I was interested in what their backgrounds would be and why they were attending the seminar. One was a boatyard manager like me and was interested in broadening his wooden boat repair horizons; interestingly, the other three with whom I shared my lunch were all intent on becoming surveyors. One particularly large

even obtain all of the necessary experience on the job—as a *surveyor*. There are exceptions to this rule, but in my experience, the resumes of the best surveyors often include long stints in the marine industry as boatbuilders, marine technicians, boatyard managers, or naval architects. Additionally—and not surprisingly—a good surveyor should be a sponge for technical details and obscure marine technical information—such as, how much does a gallon of diesel fuel or gasoline weigh, or what are the differences between (and ramifications of using) polyester versus vinylester laminating resin, or plywood versus end-grain balsa core, or aluminum versus black iron fuel tanks, and so on. Finally, a good surveyor's library (and website “favorites”) should include scores of marine and engineering technical volumes as well as subscriptions to relevant technical periodicals, such



as *Professional BoatBuilder* and *The Exchange*. Ready access to information and experience are the two primary factors that will make or break a marine surveyor.

WHY AND WHEN DO YOU NEED A SURVEYOR?

You might call on the services of a surveyor for a number of reasons. While the most common reason to call a surveyor is to perform a prepurchase survey, your primary concern when choosing and using



Top: Sounding a vessel's hull with a plastic mallet may appear old fashioned in this high tech era; however, it's a tried and true method of uncovering delamination. In the hands of an experienced professional, this tool is

valuable indeed. Above: Defects such as these pinched wires may be found on both new and used vessels (these wires are on a new vessel). Discovering them, however, may take a bit of doing. In this case the cable run was accessed by removing a Velcro secured overhead panel.

a surveyor should be concern for the safety of your vessel and its crew. Your insurance company or lender may require you to carry out a prepurchase survey. But bear in mind that the most important reason for performing this vital task is to ensure that the vessel isn't lost or damaged—or her crew lost or injured—as a result of a defect or equipment failure.

Your secondary concern should be financial. No doubt, you want the sale to go off without a hitch. It's natural to think, "I hope the surveyor doesn't find anything wrong." But if there's anything to be found, this is the time to find it—before the sale is finalized. Once you sign on the dotted line, you've forfeited all of your bargaining power in the sales transaction process.

Your insurer may require a survey for other reasons. After you own the vessel, your insurer may periodically want a survey to evaluate whether your vessel continues to be a good risk. In the event of a loss, your insurer may order a damage assessment or repair survey performed by a surveyor to determine the extent of the damage, the necessary repairs and their cost, and/or to oversee the repair process, ensuring that the work is being performed properly and within the bounds of the repair contract or quotation. (The insurer typically pays for these surveys, while the expense of a prepurchase survey—and all associated expenses—is borne entirely by the buyer.)

Even if there is not a lender or insurer requesting a survey, every vessel benefits from a prepurchase survey—even new vessels. The notion of surveying a new vessel comes as a surprise to boat buyers, particularly because many insurers and lenders don't require one. But as the manager of a boatyard where boats fresh from the factory are serviced and repaired regularly, I can attest to the need for prepurchase surveys on all vessels—both used and new.

Boatbuilders and dealers, even reputable ones, make mistakes. The prepurchase survey is the time and place to find the mistakes, not after you've taken delivery and you're making your first stop at a boatyard. Builders and dealers are naturally motivated to correct problems *before* a sale is finalized. Like all good businessmen and women, they want to close the deal so they can get paid. Of course, reputable builders and dealers will honor warranties. But the profit incentive—and hence the sense of expediency—is no doubt diminished once the sale is complete.

The survey you contract for may be one of several varieties or may consist of several components. Typically, a prepurchase survey that your insurer and lending institution will accept begins with the



vessel being hauled out. This allows the surveyor to carefully inspect the hull below the waterline, the through-hull fittings, and the running gear. The remainder of the survey is carried out while the vessel is afloat, beginning with a "static" or dockside inspection of the vessel and her systems. (This inspection should include operation of all equipment and gear, from anchor windlass to generator—under maximum load—and air conditioning systems.)

The next part of the survey should be an underway or sea-trial phase. The vessel should be run at full throttle for at least five minutes during the sea-trial phase, even if the owner says he or she never does this. This will determine if the vessel's engines are prone to overheating and will indicate whether the engines are turning up to their full rated rpm. (See *PMM's* "Running Gear" series, issues M/J '04 and '05, for more on why this is important.) If you purchase the vessel and later find yourself in extrem-

is—for instance, having run aground on a falling tide—there's little doubt you'll call on the engine or engines to deliver full, sustained power. Now is the time to determine whether they are capable of delivering it.

If you are having a vessel surveyed for a preliminary assessment—before an insurer or lender is involved—you might opt to first carry out only an "ashore survey." If the vessel passes this phase, you may then decide to continue the survey in a more formalized fashion that would be acceptable to a bank and insurer by completing the in-the-water and underway portions of the process.

The typical approach toward prepurchase surveys involves making an offer on the vessel, subject to survey. This means you are agreeing to purchase the vessel for the agreed on price provided she successfully passes a survey. (The tricky part involves the definition of "successfully." That's where you may be called on to



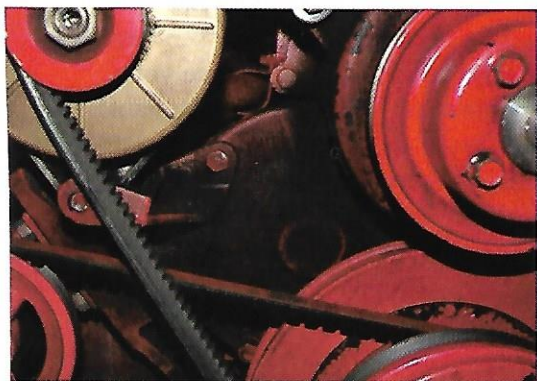
Left: Undersized, permanently installed engine room fire extinguisher bottles are all too common. The calculation requires no more than an understanding of the mathematical formula for determining volume and the ABYC requirements concerning these installations. A survey report should note the presence of such a system, as well as whether it's properly sized. Above left: Fuel tank installations should receive particularly close scrutiny during a survey. What may look secure and proper often violates ABYC guidelines, and your surveyor must know the difference. In this installation, wood has been placed in contact with an aluminum tank, which if allowed to become wet often leads to corrosion. Above right: Seacock installations must be subject to the surveyor's closest scrutiny, as a failure could lead

to flooding and the loss of a vessel. This installation receives an F; it utilizes threaded components that were never designed by the manufacturer to be mated together. If your potential surveyor can't spot this defect, keep looking.



do some negotiating.) If the vessel passes the survey with no defects or flaws having been discovered, then you've bought her. But if the survey turns up issues, this is your chance to walk away or negotiate for the items to be repaired before the purchase is completed or for a credit toward their repair after the transaction is completed. (My preference is to negotiate a change

hull, deck, and cabin for areas of delamination or saturated core. This tool, in the hands of an experienced professional, remains among the most useful and important in carrying out prepurchase surveys. For wood vessels, an ice pick was also commonly used to find areas of rot or damaged wood. In addition to the above-mentioned tools, today's surveyor



Left: While most surveyors are quick to point out that they are not engine mechanics, they should inspect the engines and genset for obvious defects. Excessive belt dust is often indicative of a loose or poorly aligned belt. While the former is usually a minor adjustment issue, the latter may require costly repairs. Middle: The hull to deck joint is another area that must be carefully inspected during your survey. The leaking interface in this image is obvious, but many are not and may not be until the vessel encounters heavy weather, long after the deal has been closed. Right: Most survey contracts make it clear that the survey excludes the vessel's engine and genset, other than to note the obvious make, horsepower or kilowatts, and serial numbers. A savvy surveyor, however, will make note of serious flaws such as the corrosion on this diesel's injected exhaust elbow.

in the sale price, allowing you—the buyer—to control the repairs after the vessel is purchased.)

This is where a surveyor's experience and skill will pay dividends. Years ago, an oil filter manufacturer used a slogan that said, "Pay a little now, or a lot later." The same axiom could be applied to surveys. In the greater scheme of things, when compared to the purchase price of the vessel, the value of a thorough and accurate survey is incalculable.

TOOLS OF THE TRADE

The most valuable tools a surveyor possesses—along with experience and expertise—are his or her senses of sight, hearing, touch, and smell. (The importance of smell comes as a surprise to many folks. As a knowledgeable mechanic, I can attest that, to the experienced nose, leaking coolant, fuel, or rotten wood/core, to name just a few examples, all have very distinctive smells.) Beyond these tools, a competent surveyor may use everything from a plastic mallet to an infrared thermograph to determine the condition of a vessel or the extent of the damage it may have sustained.

For years, the basic surveyor's tool kit included the ubiquitous plastic mallet, used to sound a vessel's

should also be comfortable with the use of more modern tools, including a moisture meter, an infrared pyrometer, and a digital multimeter, as well as a digital camera, which is especially valuable for documentation purposes.

Many surveyors shy away from using moisture meters, because they don't trust the results or they are not confident enough in these results to allow them to make or break a sale. But, in the hands of an experienced professional, a moisture meter can be an invaluable investigative tool. Surveyors who invest the time to learn how to use this tool often consider it essential. And having relied on the results of moisture meters for hundreds of diagnoses and subsequent repairs, I can confidently report that they have yet to provide inaccurate or misleading results. Having said that, it's important to point out that if used incorrectly, a moisture meter's results are all but useless.

A few examples of common moisture meter faux pas include testing laminates in subfreezing weather (if placed on a block of ice, most moisture meters will read it as "dry"); using a moisture meter on surfaces coated with metal-bearing paint, such as most antifouling paints; or using a moisture meter on a

surface that surrounds, covers, or abuts metal structures. (Metal objects will read "wet" on most moisture meters.) There are numerous other ways to use a moisture meter incorrectly, so the savvy surveyor will not only have one, but also know how to use it.

If you are purchasing a vessel whose hull, deck, or cabin structure was built using core composite construction—and nearly every fiberglass vessel uses core in at least one, if not all, of these structures—it behooves you to choose a surveyor who is able to carry out a survey using a moisture meter. (Look for upcoming *PMM* articles on the subjects of vessel construction and core applications.) For a cored hull, these tests should be concentrated around through-hull penetrations, portlights, seacocks, struts, and other hardware attachments.

On cabins and decks, moisture meters should be used around all penetrations, such as cleats, ports, windows, and hatches. Even canvas snaps and electrical through-deck fittings should not escape the scrutiny of a moisture meter.

The use of moisture meter tests should not be limited to used vessels; I've seen many new vessels that suffer from core saturation around improperly installed hardware. Unfortunately, the defect is not noticeable until several months or years have passed. By that time, the hull and deck warranty—if there is one—has often expired.

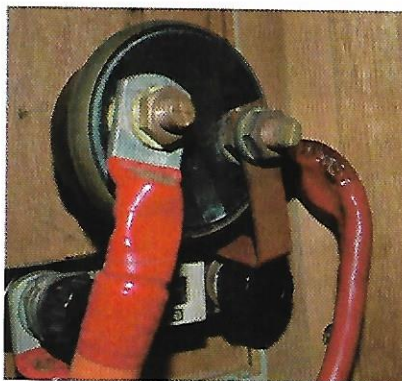
Because many teak decks are fastened using hundreds or thousands of screws that often penetrate cored decks, a moisture meter should be used to check the *underside* (inside the cabin) of such vessel's decks. This is where the fiberglass laminate is accessible and where moisture is often found.

Additionally, a moisture meter can and should be used to check a used vessel's bottom for the potential for osmosis or blisters. Even if blisters aren't present, a wet or saturated bottom is often the portent of osmotic blistering. The caveat here is that to perform an accurate examination, bottom paint must be removed to expose the underlying gel or barrier coat, and permission must be obtained from the owner to do this. Don't expect the surveyor to remove the paint; the boatyard will have to be

called on, and compensated, to arrange for and carry out this procedure. Typically, this test calls for 12-inch squares of paint to be removed in between one to three locations—depending on the length of the vessel—on each side of the hull.

WHAT TO EXPECT

It's important to let the surveyor know what your expectations are before retaining his or her services. For instance, what level of ABYC compliance you are seeking. (Few vessels are 100 percent compliant; however, you should insist on scrutiny of select categories, such as electrical—particularly over-current protection—fuel, tankage, LP Gas, and through-hull fittings, to name a few.) Do you want the moisture



Left: Although it required the removal of a drawer and the aid of a drop light in order to access, an electrical fault such as this, melted insulation on a bow thruster cable, could pose a serious fire hazard. As long as major disassembly isn't required, your surveyor should be enthusiastic about inspecting the back of every battery switch or high current disconnect. Right: In addition to the obvious message this fuel filter is sending, that it needs to be serviced, it's also sending a subtler message. It's saying loud and clear, to anyone who knows how to understand its language, "the fuel tank I serve is dangerously fouled."



survey as described above? To what degree will the engine and generator be checked out? Do you want a crankcase and transmission oil analysis or stray current/galvanic corrosion test performed? Most surveyors make it clear that they are not mechanics or electricians; they'll report on the overall appearance of this equipment, but no more. If you want this gear more thoroughly checked out (used engines benefit from compression, leak down, or crankcase pressure tests), you need to arrange to have a qualified technician—preferably, a dealer familiar with the specific make and model—to get involved in the inspection process.

A good surveyor should let you know when the services of other professionals may be needed, such as electricians or fiberglass composite or paint coating specialists. If you have an established relation-

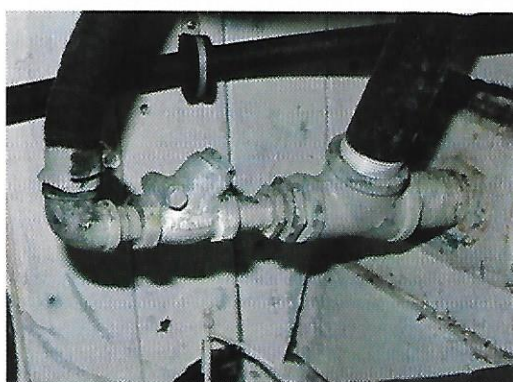
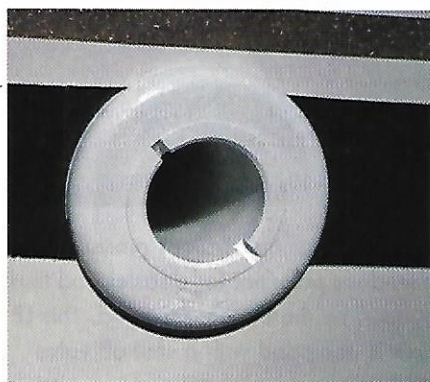


ship with a boatyard or marine service professional you trust, you may need to consult with him or her on the surveyor's findings. (I receive several calls a week from folks who are looking for help interpreting the results of a survey, from both technical and monetary standpoints.)

Typical prepurchase surveys are termed "nondestructive," which means the surveyor will not cut, grind, drill, or disassemble any part of the boat to carry out the inspection. He or she will observe, with whatever tools or senses he or she desires, as much as possible in a reasonable amount of time. But this does not mean that sole hatches, cushions, access panels, and other nonpermanent items cannot be removed to enhance the inspection. It is impor-

tant that the vessel being inspected is clean and relatively free of personal gear and belongings. (You, as the buyer, may have to convey this request to the seller or broker.) A customer once brought a 55-foot boat to me that ultimately needed many thousands of dollars' worth of work to the bilge area. The survey for the vessel indicated that the bilges could not be inspected because "they were too dirty." In my opinion, the surveyor should have halted the survey and notified the customer—the buyer—that the survey could not be completed until the bilges were cleaned.

A surveyor needs to be able to look into every possible space that can be accessed without requiring destructive or major disassembly. And he or she



Top left: Plastic through-hull fittings, particularly those that may be located below the heeled waterline, can present a serious liability. A competent surveyor must be able to distinguish between proper and improper plastic or non-metallic through-hull fittings and he or she must understand the difference between a resting and heeled waterline. This through-hull fitting has



been UV stressed; it broke upon its removal. Top right: ABYC guidelines call for seacock installations that are able to withstand 500 pounds of force applied to the most vulnerable portion of the fitting for 30 seconds. While your surveyor won't carry out such a test, he or she should be highly suspicious of an installation such as this. Left: Nothing beats a good set of experienced eyeballs and a flashlight. Most defects are uncovered during surveys through the use of patience and thorough attention to detail. Haste and inattentiveness will often result in a less than meaningful survey.

should be able to do so with relative ease, without having to move a great deal of gear or equipment. The surveyor should be limber, fit, and capable of crawling into—or looking into with the aid of a mirror and flashlight—the smallest and most inaccessible locations. These include *all* bilge and engineering areas, lazarettes, lockers, and flybridge and pilot-house under-helm spaces.

It's reasonable to expect a surveyor to miss some flaws or faults on the vessel being inspected. The surveyor has a limited amount of time in which to learn as much as he or she can about a vessel, and the scope of work covered by the fee typically is not open ended—like most, the surveyor's business is for



profit. When asked, I tell my customers that it's reasonable to expect to spend as much as 10 percent of the purchase price of the vessel making corrections and safety-related improvements once the boat is theirs—many of which may not have been detailed by the survey. If you find considerably more than this, and particularly if the flaws are blatant and obvious, at the very least, let the surveyor know you were less than satisfied with the survey.

Read and make sure you fully understand the surveyor's contract and fee structure before signing.

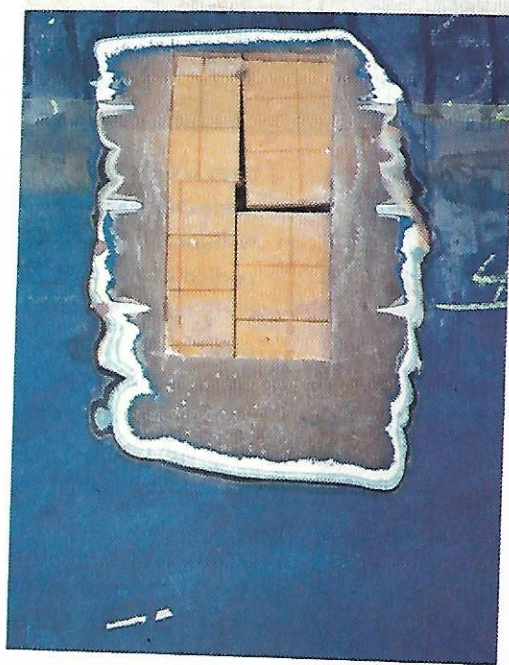
Some surveyors charge flat rates for surveys based on the length of the vessel, while others may charge by the hour or day. But there may also be travel expenses, per diems, or additional charges to wait for a vessel to be moved, hauled, or launched. Make certain you understand the limitations. Typically, all fees—unless other arrangements are agreed on—associated with a survey are borne by the buyer. This may include hauling or launching the vessel, a captain to operate the vessel during the sea trial, as well as disassembly of any components for inspection or destructive testing (with the permission of the owner, of course). Additionally, make sure you inquire as to how long it will take the surveyor to complete and deliver his or her written report once the survey is complete.

Many surveyors' contracts essentially absolve them of liability for mistakes or omissions. It's not unusual to find language such as "This surveyor is not to be held responsible for any inaccuracy, omission, or error in judgment" at the beginning or end of a marine survey. Such all-encompassing statements mean that if something—anything—is missed or misinterpreted in the survey, you technically can't hold the surveyor responsible (although most surveyors carry substantial liability insurance). Unfortunately, there's not much you can do about this type of language; most surveyors simply will not be contracted without it. It

shouldn't necessarily be taken as an indication that the surveyor is inept or attempting to avoid responsibility; it's simply de rigueur for the industry. But you should know it's there, and you should be aware of its implications before making a financial commitment.

CHOOSING A SURVEYOR

This is undoubtedly the most difficult and critical component in the boat-buying process. Choose the right surveyor—from whom you receive a thorough

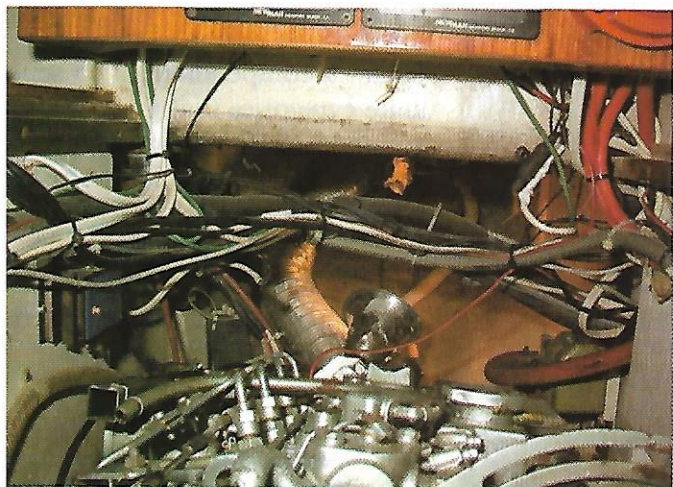
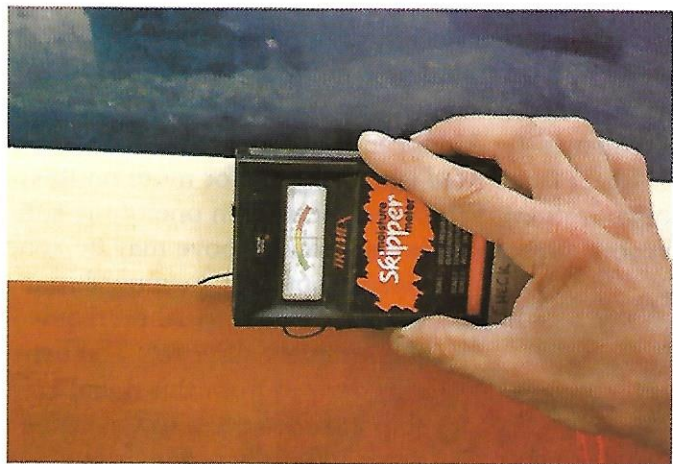


Top left: LP Gas installations present a tremendous potential for disaster and thus they must be thoroughly surveyed. This LP locker is equipped with a shut off valve outside the containment vessel, an ABYC violation that would be clear to any competent surveyor. Top right: Typically, only a "destructive survey" would reveal this type of saturation damage to a plywood cored deck. A moisture meter, however, can offer an invaluable glimpse beneath the deck, into problems such as this, provided it's in the hands of an experienced professional.

Left: Unfortunately, the average non-destructive survey cannot reveal poor boat building techniques such as this substandard core installation (core should be free of gaps or channels).

survey—and it can be relatively painless (other than writing the check). Choose the wrong surveyor, and you may get a poor, incomplete survey that misses critical flaws and defects, at which point your problems will have only just begun.

As always, word of mouth can play a big role in finding or narrowing down your list of potential surveyors. Fellow boat owners who have recently had boats surveyed that are similar in complexity to the one you are considering purchasing may be one



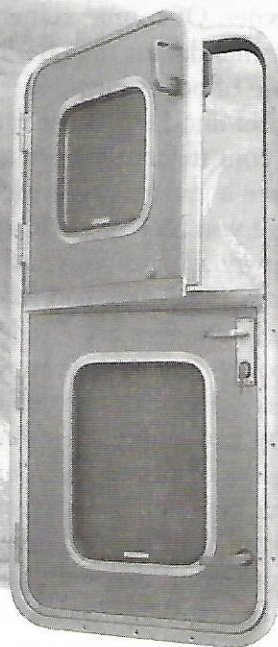
Top: Moisture meters are used everyday by boat yards and surveyors to determine the moisture content of fiberglass laminates and core structures. In the hands of an experienced surveyor, one who knows how to use a moisture meter, the information this tool yields may be invaluable.

Above: Sloppy, poorly secured or unsafe wiring practices are a red flag to an experienced surveyor. They are often indicative of poor maintenance and other problems lurking beneath the surface.

source. (Don't rely on just a single recommendation; if several owners recommend the same surveyor, that's surely a good sign.) The problem with asking another boat owner is that he or she typically has only one survey performed every few years, if that. So they may simply have been lucky to have found a vessel that was in good condition.

A source that may be considerably more valuable is your local boatyard manager, or one located in the area where you are making your purchase. These folks typically work with many surveyors, and read their surveys, in the course of performing their duties. High-volume yards often see and work with surveyors and surveys on a monthly or weekly basis.

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The breadth of their experience with these folks is often considerably wider than that of a single boat owner. Of course, remember that any source or recommendation may be flawed or biased; it's truly a case of buyer beware.

Yet another source for surveyor recommendations is your insurance underwriter. Insurance companies have a vested interest in seeing that you receive as thorough a survey as possible; they don't want to take on bad risks. As such, chances are good that your broker may be able to recommend surveyors whose reputation and ability meet the requirements of your chosen insurer. Additionally, if you've already found your dream surveyor, it's worth checking with your insurance company to determine whether they have any special requirements for surveys or surveyors from whom they'll accept surveys, such as membership in one of the professional organizations, level of experience, or number of years practicing the trade.

Once you've narrowed down your list of potential surveyors, begin by checking his or her credentials. What professional memberships does he or she hold? Most, but not all, surveyors belong to one of the two largest surveyors' organizations in the United States: the National Association of Marine Surveyors (NAMS, nams-cms.org), established in 1962, or the Society of Accredited Marine Surveyors (SAMS, marinesurveyor.org), formed in 1987. (These organizations' websites list their members by geographic area so they can provide a starting point for finding a surveyor.) While membership in one of these organizations is usually considered an asset, it is by no means a prerequisite. Many excellent surveyors belong to neither of these organizations. By the same token, it's likely that some less than competent surveyors populate the ranks of both groups.

Diligent, conscientious surveyors are forever

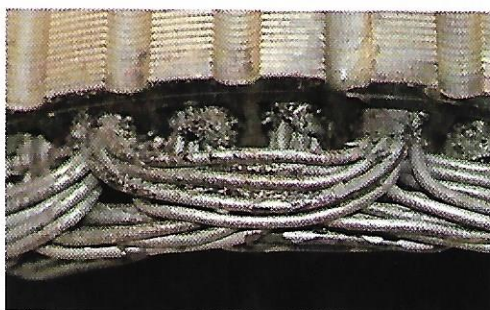
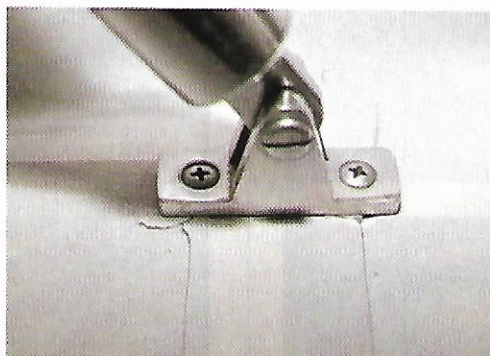
broadening their technical horizons through self-study and by attending continuing education courses. A premier resource for both of these educational avenues is the American Boat & Yacht Council (ABYC) (see *PMM* issue M/J '04 for more on this organization). While membership in one of the surveyors' organizations mentioned above may be con-

sidered optional, membership in the ABYC is a virtual prerequisite for every surveyor. The benefits derived from this membership include access to the standards (officially termed the "Standards and Technical Information Reports for Small Craft," a compendium of 65 separate categories that guide and advise builders, repair yards, and surveyors on everything from LP Gas and AC/DC electrical installations to steering systems and seacocks), as well as a host of seminars and certification programs. ABYC membership is simply a must for the proactive surveyor. Ask about his or her membership and check to ensure it is current (abycinc.org).

As mentioned earlier, professional marine industry experience is also an invaluable asset for the marine surveyor's resume. What he or she did before becoming a surveyor may count for a great deal in the selection process. Who better to determine the condition of vessels than someone who has spent years building or repairing them or supervising these operations (much like the retired sea captains and shipwrights of old)? In essence, experienced boatyard employees have often seen it all,

from wet deck core and abominable wiring to corroded fuel tanks and improperly secured batteries. As a result, they often make excellent surveyors, particularly the ones who hold one or more ABYC certifications.

It's important to remember for whom the surveyor works and where his or her responsibilities lie. It should be clearly understood that once you've contracted with and agreed to compensate a surveyor




Top: Although this damage appears to be minor, it should capture the attention of a competent surveyor. Cracks such as this around fasteners in cored structures often lead to expensive repairs. Above: During a survey, a sharp surveyor noticed that the casing on an alternator was discolored. He noted it in his survey and allowances were made for its repair. Upon disassembly, the winding, shown here, was found to have been seriously overheated as a result of an electrical fault. The new owner was happy his surveyor had caught this. The repair cost him nothing.



for his or her services, he or she works for you and no one else. You own the survey results in both written and verbal form. Beware of surveyors who may have a conflict of interest and avoid those who survey on a part-time basis while working elsewhere in the marine industry. (Some surveying organizations prohibit their members from doing this for obvious reasons. You wouldn't want a surveyor who had a financial connection with a brokerage or marine repair business.) Your preference should be for someone who eats, breathes, and sleeps surveying—an individual whose entire professional pursuits are centered around learning as much as he or she can about the profession of surveying, building, servicing, and repairing boats.

When asked, most reputable brokers will recommend a surveyor. (Ideally, they will recommend several.) You may feel as if you have no other resource other than the broker, particularly if the vessel is located far from home. My advice is to avoid this potential conflict of interest. While most brokers are honest and upstanding, remember that their financial and moral obligation is to their customer; he or she will protect and promote the interests of his or her client, the owner and seller of the boat you are having surveyed. If you choose to rely on the broker's recommendation, use the same scrutiny you would if you had found the surveyor on your own. Ask all of the questions mentioned above, and judge the surveyor's credentials and experience carefully.

CONCLUSION

Regrettably, I can't turn the clock back for all the folks I've encountered during my professional career who have experienced the heartache of poor or incomplete prepurchase surveys. But it's not too late for readers who have yet to enter this fray or who will enter it yet again. Select your surveyor as you would choose a medical specialist, based on skill, reputation, competency, and experience rather than on geography or availability. If you are unable to locate a local surveyor who meets the above criteria, don't be afraid to call in a well-respected "top gun" and fly him or her to your dream vessel. This will nearly always be money well spent. Choose your surveyor wisely, or be prepared to choose a good boatyard. 

Steve D'Antonio is PMM's Technical Editor and the VP of Operations for Zimmerman Marine, a custom boatbuilder and full-service repair yard in Mathews, Virginia.

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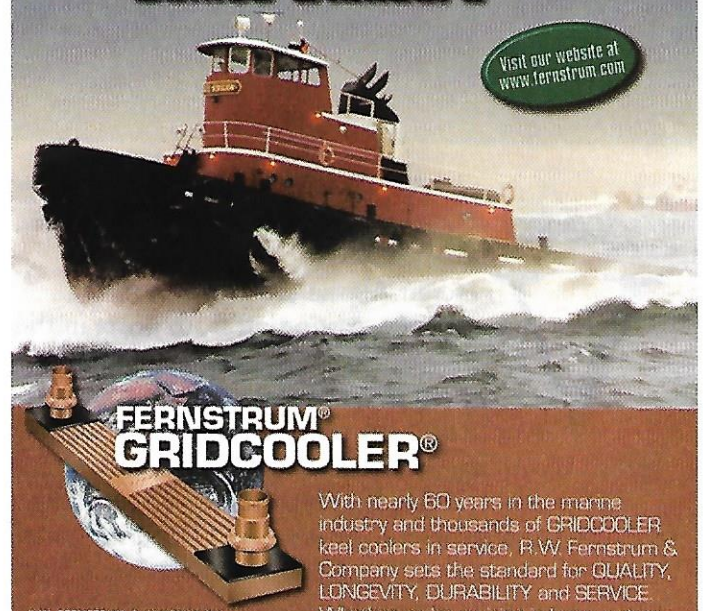


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