



Tapping a hull with a hammer was a surveying technique in the days of wooden boats, but the practice remains essential today when inspecting fiberglass vessels for core saturation, resin starvation, and delamination.

BOAT BUYING BY MICHEL SAVAGE

For Surveyors, Time to Measure Up

The industry has set standards for boat surveys to reduce lawsuits and hassles

FORGET THE POTENTIAL TERRORS awaiting a boat at sea. There are, unfortunately, plenty of stormy tales of owners plunking down a boatload of dollars for a hull filled with miseries that surface only after the check has cleared.

Boats are complicated machines, and to be safe, a potential owner should use the same "buyer-beware" approach to hiring a surveyor that he would if he were hiring any professional. Not so long ago, a salty appearance was about all you needed as a credential to call yourself a marine surveyor. Although the National Association of Marine Surveyors (NAMS) was set up in 1962 to protect clients against "spontaneous surveyors," this early attempt at self-regulation focused mostly on com-

mercial boats and did little to inhibit those who determined they were competent enough to practice, mostly because they had a knack for things technical or because it was the perfect job for a retiree who liked boats and needed something to do.

To be sure, some of these "experts" were good in at least one aspect of yacht surveying: Although their surveys were rather unstructured, their intuition often led them in the right direction.

But on the whole, it was a boon for the lawyers. Because the quality of any survey ranged from excellent to dangerously inadequate, there were plenty of occasions when an owner headed to court long before his new boat headed out of the harbor.

A self-appointed surveyor, for instance, once inspected a boat for a client who needed a craft with a draft of 5 feet or less in order to clear a sandbar blocking access to his waterside house. Given the surveyor's stamp of approval, the client bought the boat and

soon ran aground trying to reach his house. The surveyor was sued successfully because it turns out he'd failed to measure the boat's draft.

In a prepurchase inspection, another surveyor failed to detect extreme saturation and delamination in a transom, costing the buyer a re-



pair bill of \$30,000. This was another win for the lawyers.

And then there's the high-profile surveyor who works near my Canadian home. He's known to perform four yacht



surveys per day. Since it can often take others a full day to properly survey a 30-foot boat and write a detailed report, one might ask how he inspects four boats a day and produces

a report on each one. It's worth noting that this individual was refused membership in the Society of Accredited Marine Surveyors (SAMS, founded in 1987 to standardize and regulate the profession.)

Changing Expectations

With stories like these fueling concerns in the marine industry, the last few years have seen sailors, insurers, lenders, and legitimate surveyors agree to develop acceptable standards and inspection methods. After all, most trades and professions are guided—if not governed—by codes of ethics, membership requirements, and universal standards.

By contrast, when it comes to yacht surveyors, there are only about 1,500 accredited professionals in the United States, too few to justify regulation by the government or by another legally binding institution. Meanwhile, there are many others who've hung out a shingle and call themselves surveyors—with or without the training needed to do a proper job.

The Reputable Surveyor

The reputable surveyor abides by strict ethical rules set forth by the industry's two most recognized organizations, NAMS and SAMS. The NAMS' credo, for instance, states that "no surveyor shall take any position contrary to his own knowledge or opinion for any direct or indirect monetary gain or its equivalent." This is important, because in the past, some self-appointed surveyors had been known to make deals with yacht brokers at the expense of potential buyers or with owners against insurers. The first objective of the reputable surveyor is to work strictly for the client and to report only what's observed and known about the boat.

The accredited surveyor inspects boats according to the

The Industry, Up Close and Personal

My first experience with a marine surveyor came when the buyer of my Westsail 32, living in Venezuela, hired a local surveyor to inspect my boat on the hard in Florida. In less than 20 minutes, he'd checked the engine, inspected the navigational lights, and inquired about life vests. With that, his survey was done, and the boat was sold.

Many years later, it was time to sell my gorgeous Alajuela 38. This time, the buyer's surveyor, a retired employee of a well-known boat factory, was systematic, patient, and knowledgeable. He sounded the hull, the deck, and the rudder and conducted a sea trial. He used an infrared detector to measure the temperature of the engine cylinders. Despite his Sherlock Holmes-like investigation, all he found was an outdated fire extinguisher and a cylinder that ran a little hot. But what was important is the fact that the buyer clearly benefited from his due diligence.

I wish I'd been that lucky when it was my turn to pay the bills. I once hired a well-known surveyor to be "my eyes in the field," since I couldn't be present to inspect the boat myself. His report turned out to be an equipment checklist with a few recommendations relating to extinguishers, oily water in the bilge, life vests, peeling bottom paint, and some generic comments that apply to all boats of this type. Based on his report, I thought the boat was in great shape.

When she arrived by truck to the U.S. East Coast, I discovered an entirely different situation: The inboard end of the main bulkhead was rotted through, top to bottom, in a foot-wide strip. Although the edge of the bulkhead was covered with teak moldings, obvious repairs had been made to the deck beam just above, and these should have raised a question in the surveyor's mind concerning the ingress of water into the wood via the mast wires.

The halyards were stuck at the masthead, which was itself a solid mass of corrosion. The

surveyor hadn't even tried to pull on the halyards; if he had, the problem would have been obvious. Both water tanks were leaking. Although a pressure test is usually required to establish the integrity of tanks, in this instance I could clearly see a bottom weld that was consistently wet. Both fuel tanks were also leaking, and again, evidence of this was clearly visible at their aft outboard corners, which were constantly wet with diesel.

Although the report stated that the "electrical system [was] ample and well installed," none of the electronics worked, the batteries were shot, and many items listed in the inventory weren't present on board. A simple "power-up" test would have revealed much about the electrical and electronics systems.

There were about 45 gallons of water located between the ballast and the inside of the hull. A simple moisture analysis would have at least suggested that fact. And although the report stated that there was "some slight evidence of blistering," the hull was in fact covered with some 600 blisters, and there was an area of delamination measuring 3 feet long by 2 feet high.

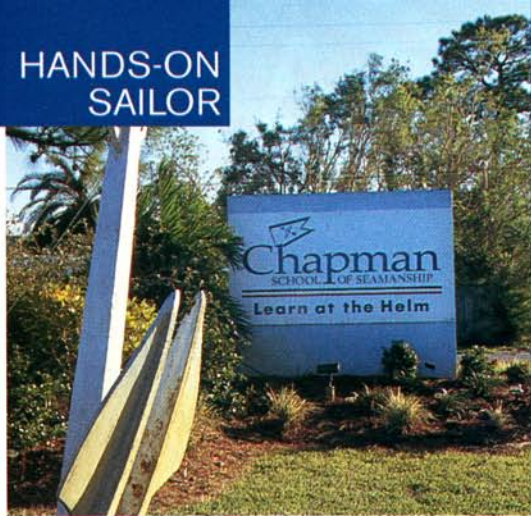
His report also stated, "The engine was reported to be in good operating condition, with only 688 hours on the meter." A competent inspector should have noted that a 20-year old boat showing only 688 hours on the engine would indicate that either the meter was defective or else that the engine hadn't been run much. There's probably nothing worse for a raw-water-cooled engine than to sit unused in a saltwater environment. And, in fact, the engine's water jackets and conduits turned out to be clogged, and the engine overheated.

Put it all together, and you have a textbook lesson of why buyers need to be as aware of the shortcomings in a surveyor as they are of the flaws in the boat they want to buy.

M.S.



The author's "eyes in the field" turned out to be blind.



latest yacht-construction standards: those of the American Boat & Yacht Council (ABYC), the National Fire Protection Association (NFPA), the U.S. Coast Guard, and other industry bodies. Today, most reputable surveyors are often also experienced mariners who can apply experience to practice—they'll know what breaks down at sea and what's essential to the safety of vessel and crew.

When reading a survey, it's important that a potential owner understand what is—and isn't—covered by a report. A surveyor should report only on what he or she can see and clearly state what wasn't inspected. An excellent surveyor, for instance, had inspected my Alajuela 38 for a potential buyer and had failed to notice that the adjusting nuts on the forward engine mounts were bottomed out and couldn't be further altered. Was this an oversight? Not necessarily, because the only way he could have detected the problem would have been if he'd tried to align the engine. In other cases, an area concealed by a panel might not be inspected because surveyors are bound to observe only what they can without resorting to any destructive means.

Some say that surveying is an art; others suggest it should be a science. In reality, it's both, which is why, for instance, some insurers unrealistically expect surveyors to give exact moisture-meter

readings in their reports, while most surveyors would agree that meters are meant only to provide relative readings. The sole method to determine actual moisture content is to drill holes and sample the hull, a step that most sellers would reject.

if the latter recognize they have to brush up in some areas if they want a certificate to attest to their professional abilities. Two major survey schools are the Havnorn Marine Survey & Shipwright School in Seattle, Washington, and the Chapman School of Seamanship in Stuart, Florida. Both offer comprehensive programs covering every aspect of boat and small-craft surveying.

Other individuals and organizations also offer courses covering various aspects of small-boat inspection, including the WoodenBoat School in Brooklin, Maine. WoodenBoat has two seven-day courses, one focusing on wooden boats, the other on fiberglass construction. A number of correspondence schools also offer surveying instruction, including one offered by the U.S. Sur-

veyors Association and Navtech. Although I've sailed extensively over the past 25 years and have rebuilt and inspected boats, I felt it was necessary to formalize my approach to surveying, so I took a full course at Chapman. The program is divided between theory and hands-on experience. In class, instruction consists of boat construction, mechanics, onboard systems, legal issues, and information about starting a business. Workshops take place either in the mechanics lab or in the field. The Chapman School is a nonprofit organization and accepts boat donations, so there are several boats in the water and on the hard that can be used for practice. Additionally, the program includes visits to boat manufacturers operating in Florida, such as the Catalina yard in Largo. These visits enable the surveyor to better understand boat construction.

After 180 hours of classes, workshops, and regular tests, there's a final exam that includes an actual survey. The survey I conducted cost me \$400 in transportation fees and took about 70 hours of inspection time. The resulting report was 60 pages long and contained 450 pictures.

"A very pretty survey," said a smiling Rick Foster, the director of the program, "but it isn't very viable economically."

M.S.

Hiring a Surveyor

So what should you look for when hiring a surveyor?

■ A good candidate is a member of NAMS or SAMS and should belong to ABYC and other organizations that will

keep him or her up-to-date on technological advances and new products.

■ A professional will only survey a vessel if he or she is knowledgeable about its construction. A surveyor, for example, who's unfamiliar with steel construction methods will say so up front.

■ A professional will be clear with a client as to the services to be delivered. For instance, will he or she climb the mast, have the oil analyzed, or conduct a sea trial? Look for an accurate work order that out-

lines the inspection.

Although surveyors aren't required to be professional photographers, expert writers, experienced mechanics, top-notch electricians, salty dogs, boatyard bums, and public-relations pros, they are in fact all of these. More important, a good surveyor will give you a pretty solid idea of just what you're getting into before you write that check to the seller.

Michel Savage is alive and well and living in Quebec.

Surveying Resources

American Boat & Yacht Council (ABYC): (410) 956-1050, www.abycinc.org

Chapman School of Seamanship: (772) 283-8130, www.chapman.org

Havnorn Marine Survey & Shipwright School: (206) 789-7043,

<http://home.earthlink.net/~havorn/hsindex.html>

National Association of Marine Surveyors (NAMS): (757) 638-9638, www.nams-cms.org

National Fire Protection Association (NFPA): (617) 770-3000, www.nfpa.org

Society of Accredited Marine Surveyors (SAMS): (904) 384-1494, www.marinesurvey.org

U.S. Surveyors Association and Navtech: (800) 245-4425, www.navsurvey.com

WoodenBoat School: (207) 359-4651, www.thewoodenboatschool.com

M.S.