

Marine Surveyors

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Many fishermen look forward to a marine survey with about the same enthusiasm as an IRS audit. And they have good reason. In the worst case, a survey can reveal previously unknown conditions that can be costly to fix, diminish the value of the boat, or kill a pending deal.

Usually it's not that bad. Many boats pass surveys with flying colors, their owners instilled with an additional sense of confidence. A favorable survey report can support a high asking price if the boat is for sale. Even if the surveyor makes substantive recommendations, the person who commissions the survey is first to know and can decide how to respond.

There are many different kinds of surveys, including construction, repair, on/off charter, load and stow, compliance, design and structural suitability, cargo, pre-sale, and donation. Most fishermen, however, are likely to encounter only three: condition and valuation (C&V), pre-purchase, and if misfortune should befall, damage/loss.

The purposes of a C&V survey are to identify a vessel and its equipment, determine its value, and indicate its condition and seaworthiness along with any defects that might compromise its safety.

Most insurance companies and lenders require a C&V survey once every three to five years. The companies want assurance that the vessel remains an acceptable risk, and to be aware of any significant change that might affect the agreed value. Although the owner normally commissions the survey, it is intended to assure the lender or insurer that the described boat actually exists, is more-or-less as the owner has indicated in terms of configuration, equipment and condition, and is suitable for its intended use.

Some lenders call a C&V an appraisal, although the term implies a more careful examination of the market for similar boats than of the boat itself. Some surveyors actually do appraisals, usually to establish value for purposes of donation or estate settlement.

A C&V survey is supposed to include an inspection of all the components of the vessel needed for safe operation, including

propulsion, underwater appurtenances, hull and through-hull integrity, fuel system, plumbing, electrical system, controls, navigation electronics, bilge pumps, safety gear, and so on. So-called insurance surveys done by "galley table" surveyors produce little more than a list of the above, but you can usually get the surveyor to do a real inspection if you want it.

Insurers increasingly are requiring more thorough C&V surveys and in some cases specify an accredited survey to ensure consistency. Surveyors who are members of professional associations, such as the Society of Accredited Marine Surveyors (SAMS) and National Association of Marine Surveyors (NAMS) subscribe to an ethics code and adhere to a set of professional standards. Their surveys tend to be more standardized and less subject to owner influence.

Unless a number of similar boats are in the process of being sold locally, the surveyor may not have much of a basis for valuation, so the power of owner suggestion commonly is a major factor. Surveyors use publications similar to the automotive "Blue Book" to establish values for common production recreational boats, but nothing like that exists for commercial vessels. They may consult with brokers for sale prices on comparable vessels, read ads in the journals, or check the many Internet boat markets for current values.

A C&V survey on a small commercial vessel or yacht can be done in two to four hours for around \$5 to \$10 per foot of hull length. The surveyor may require a haul-out to minimize liability exposure.

A pre-purchase survey usually is more thorough. This is where the owner's palms become sweaty as the surveyor crawls over and through his baby, flashlight and mallet in hand, peering, poking, rapping, looking for the tiniest flaw. A good one can take a whole day and includes an in-water examination of the whole interior and topsides, an out-of-the-water inspection of the bottom, and a sea trial lasting at least an hour to test all the systems. A pre-purchase or

new boat completion survey on a large vessel could take several days.

Some surveyors don't make a distinction between insurance and pre-purchase surveys, claiming the quality and thoroughness of their work is the same regardless of its purpose. In fact, some don't even ask the purpose. That's a good policy from the surveyor's prospective because he or she never knows how a survey report may be used later on, and this approach reduces the surveyor's liability exposure.

A damage/loss survey is done after a vessel is damaged in a grounding, collision, fire or other accident. Normally the insurance company requires one before authorizing and paying for repairs. The surveyor documents the damage that has occurred, and tries to differentiate between what is the result of the recent accident and what was a pre-existing condition. The damage survey addresses just the damage and not the overall condition of the vessel or other specific concerns. The surveyor documents the damage and attempts to determine the cause, but not to place blame. The surveyor may also estimate the cost of repair for the underwriter. While the insurance company normally pays for the survey, the surveyor is not an insurance adjuster, cannot determine whether the loss is covered, and does not base fees on whether insurance is paying.

What a good damage surveyor can do, however, is to advise the owner on ways to ensure full reimbursement for all appropriate costs, and point out other damage that the owner did not notice. The surveyor may provide an information sheet on how to document damages and costs and how to report the owner's and crew's labor on the repair job.

Surveyor Qualifications

Anyone, irrespective of experience, training or education, can print up a business card and go into business as a marine surveyor. In general, individuals tend to enter the field after working in commercial fisheries, work boats, shipping, vessel design and construction, or after service in the Navy or

Coast Guard. However, there is no experience, training, testing, or certification requirement.

To bill oneself as a “certified”, “accredited” or “master” marine surveyor, however, requires participation in one of the national marine surveyor associations. SAMS apparently is the largest with about a 1,000 members, including Accredited Marine Surveyors (AMS) and Surveyor Associates (SA). NAMS has about 400 members, which includes Certified Marine Surveyors (CMS) as well as Apprentice and Associate members. U.S. Surveyors Association has nearly 300 members and is closely associated with a correspondence surveyor training school called Navtech/US. Its top qualification is called Master Marine Surveyor. The Association of Certified Marine Surveyors is a smaller group with fewer than 100 members, and also has a category called Certified Marine Surveyor.

Each of these associations has a list of criteria that must be met to earn the Accredited, Certified or Master title. Criteria vary by association, but generally include some combination of previous marine survey experience, testing, and submission of work examples. Some associations require members to take annual continuing education courses to maintain their accreditation. Interestingly, none of the associations requires experience actually operating vessels; in fact there seems to be a bias toward a background in design or construction rather than seafaring.

Because the associations require previous surveying experience (usually five years), it is important to note that a surveyor could have been working full time in the field for several years and be a member in good standing of one of the associations, and still not be “certified” or “accredited.”

There are several specialties in the surveying profession, including yacht, fishing vessel, cargo, blue water, NDT (non-destructive testing, including wood moisture content and metal ultrasound), accident and fraud investigation and legal proceedings, and various specialties relating to shipping and marine transport. Most specialists acquire their expertise through previous experience and practice. Some associations have continuing education courses in the specialties and require their members to pass tests before they can specialize. However, most surveyors doing small commercial and recreational boats are generalists and may not have specific training in yachts and fishing vessels.

What the Surveyor Does

In many cases, what the surveyor does is largely a function of what the person who commissions the survey wants done. Some surveyors work for the individual who commissions the survey, and they do as much or as little as that person wants done. Sometimes those desires are as much implied as expressed.

Other surveyors, particularly NAMS and SAMS members, hold that a survey should include a certain lengthy list of inspections, and they conduct them. Although insurance companies demand periodic C&V surveys, they normally don’t pay for them and most don’t provide a form or specific directions to the surveyor, so the results vary widely. Association member surveyors tend to use standardized forms, which improves information consistency.

At a minimum the surveyor fills out his or her own form listing the vessel’s dimensions, general configuration, specifications (such as engine type, horsepower, tankage, electrical system capacity, etc.), and an inventory of equipment, including electronics, galley, plumbing, deck machinery, safety equipment, and attached items like skiffs and dinghies.

The surveyor probably checks inspection and expiry dates on fire extinguishers, liferafts, and EPRIBs, and the vessel’s certificate of documentation and any other required paperwork. The surveyor should examine the bilges and through-hulls, take a look at some of the wiring, inspect the decks and cabin sides, and roof, and look at the bottom and underwater appendages for signs of leaks, damage, blistering, or corrosion. Engine and gear fluids, belts, and hoses may be checked.

The information is written up in a report that contains the form with all the specifications and equipment, and a brief narrative summarizing findings, recommendations for repair (if any), an assessment of suitability for the vessel’s intended purpose, and replacement and current market values.

Some surveyors are more thorough even on insurance surveys, and all should be on pre-purchase surveys. In addition to the above, they will:

- Pull panels in cabin sides and roofs if there is evidence of leaks or rot.
- Test all the pump switches and through-hull seacock valves.

- Operate all the mechanical and electrical items to ensure that they work.
- Sound the entire hull with a mallet every couple of feet to ascertain soundness.
- Use a multimeter to test for stray electrical currents and potential galvanic corrosion.
- Examine all accessible spaces such as lazarettes and storage areas under the cabin sole, and sound and inspect fuel, oil, and water tanks for corrosion, contamination, and potential leaks.
- Compare all mechanical, electrical, and safety systems against appropriate Coast Guard, American Boat and Yacht Council (ABYC), and National Fire Protection Association (NFPA) published standards. In the case of larger vessels, SOLAS or classification society standards may be applied.
- Examine paint, varnish, gelcoat, upholstery, carpeting, paneling, and other cosmetic elements of the boat, looking especially for cracking, crazing, and water-darkened wood.
- Take photos of the whole boat and specific features to backup observations in the report.

The complete survey includes both in- and out-of-water inspections, plus a sea trial of sufficient duration to permit testing all the equipment as well as allowing the engines to get up to temperature in order to test responsiveness to controls, overall performance, and to identify any peculiarities.

What surveyors will not do:

- Most marine surveyors do not survey engines. They probably will check oil and coolant, look for fluid and exhaust leaks, check hose clamps and mounting bolts, and probably run the engine and test the throttle and gear shift. For any more than that they’ll refer you to an engine surveyor, who probably is a local mechanic with experience in the kind of engines in your boat.
- They usually don’t do destructive testing (cutting into non-accessible

spaces, drilling hulls to test for rot, corrosion or moisture, or intentionally breaking items to test their strength) unless specifically requested in advance by the person commissioning the survey and agreed to by the owner. The individual paying for the survey and the owner (if not the same person) have to decide who pays for any dismantling and also for repair after destructive testing. (Poking wood with a pen-knife or scraping corroded metal is not considered destructive testing.)

- They do not make assessments of a vessel's insurability. The underwriter does that. The surveyor simply states whether or not it is suitable for its intended use.
- They do not initiate repairs, nor do they normally provide estimates of cost, except in the case of some damage surveys.

The Survey Report

A full survey inspection takes at least several hours and often a full day, and when it is completed the surveyor isn't finished. Before writing the survey report, he or she may have several hours of research to do to ensure compliance with all the standards and regulations, and to ascertain values.

The report has these components:

- A completed form which identifies the vessel by name, official number, and dimensions, a description of configuration and layout, and a fairly detailed inventory of equipment.
- A narrative describing the type of build, any modifications, general condition, and observations about safety and suitability.
- A list of recommendations (if any) including "priority recommendations" that must be addressed for the vessel to be safe, and standard recommendations or suggestions that are not urgent or mandatory but would bring the vessel into full compliance with industry standards or improve an already acceptable level of safety.

- An appraised value, including replacement and market value figures, and the basis of determining the values.
- A cover-letter page and a disclaimer or statement of limitations includes a section describing which areas of the boat were inspected and which were not, and disclaims responsibility for any use of the survey other than the intended.
- Copies of the photos taken in the course of the vessel inspection.

The full survey report normally is presented one to several days after the inspection.

Working with Your Surveyor

The first step toward establishing a good working relationship with your surveyor is to select one you trust. In some cases lenders or insurers will provide a list from which you must select. If you don't know one personally, ask other owners whom they recommend. If you don't have a recommendation, contact one of the associations for a list of members. Membership does not guarantee a quality survey, but at least you know the association has a membership application process and an in-house professional review panel that investigates claims of ethical or technical malfeasance.

The second step is to discuss your survey in advance. Make it clear what you need, and find out what the surveyor expects of you. Do you also have to remove equipment, fill or empty tanks, scrub the bottom, or generally clean the boat before the survey? Some surveyors require a signed contract before they go to work.

Plan to attend the survey, but don't bring a bunch of friends, and don't take up the surveyor's time with excessive conversation. Idle chatter can distract the surveyor from the job. Wait until the surveyor takes a break or speaks to you before bombarding him/her with questions.

Here are some tips on preparing for a survey. If you're selling a vessel or getting an insurance survey:

- Get a copy of a surveyor's report to see what your surveyor will be looking for. You can buy a personal survey template from Global Marine Industries that will help you anticipate discrepancies and repair them in advance.

- Ensure that the vessel is complete and fully assembled and all equipment works.
- Take personal belongings off the boat, empty lockers, and prepare to provide the surveyor unobstructed access to all the compartments, voids, and storage areas. Surveyors often will refuse or delay a survey if the vessel is in poor condition or seriously needing housekeeping.
- Gather up the vessel's documents, logbooks, and other paperwork and make them available to the surveyor. Make sure all safety equipment is up to date and provide documentation.
- Don't start the engines before the surveyor arrives. In tropical climates they don't like to work around hot machinery, and in cooler climates pre-warming engines can conceal conditions that the surveyor should be able to note.
- Keep the batteries charged so the engines will start.
- Test seacock valves and other devices to ensure that they work.
- Clean the boat, inside and out. Pay special attention to the head, and empty the holding tank.
- Consider getting a "pre-sale" survey before a buyer steps up, to anticipate any problems the buyer's surveyor is likely to raise.

If you're getting a pre-purchase survey on a vessel you want to buy:

- Make an appointment for haul-out in advance.
- Arrange with the owner for the sea trial. The owner must provide adequate fuel and may want to be present, or may hire a skipper for the sea trial.
- Get the owner's approval for any removal of panels or linings or for any destructive testing, if required. Get an agreement on who is to pay for replacement or repair of areas dismantled for the inspection. Sched-

ule an engine survey for the same time, or for a time compatible with your surveyor.

- Discuss a “kill fee” with the surveyor, so that if initial examination turns up a serious flaw that would kill the deal, you don’t have to pay for a thorough inspection.

On a damage/loss survey, cooperate with the surveyor by completing the forms provided to explain the circumstances of the incident and its causes. Be available to point out the damage. Save all damaged or failed parts, and all invoices and receipts.

If you are involved in a construction, conversion, or major repair job, it’s a good idea to have a surveyor inspect your boat in stages while the work is under way. It costs little more than a single survey, and allows the surveyor to inspect areas of the boat while they’re accessible. At the same time it assures you that the work is being done correctly so that the vessel will receive a favorable review when the job is completed.

A final point—if you have a deadline looming, such as an impending sale or insurance renewal, don’t wait until the last minute to call a surveyor. Many are booked up weeks in advance, especially before and during the season. Besides, if the surveyor has recommendations, you’ll need some time to comply and may even need to call the surveyor back for a final check before you’re good to go. ♦