## Seminars Currently Offered Annually in Port Townsend, Washington

This year's Marine Survey seminar will be from:

June 23<sup>rd</sup> to June 27<sup>th</sup>.

Class times are from 9:00 a.m. - 5:00 p.m., with a one hour lunch break.

The cost for this seminar is \$650.00.

For more information contact:

Lee Ehrheart (206)789-7043 <u>leehavorn@gmail.com</u>

Havorn Marine Services, Inc. P.O. Box 17521 Seattle, WA 98127

Below is an overview of the curriculum for our 5 day fiberglass and wooden boat seminar.

Day 1

Introduction of instructor and attendees

Description of agenda for days ahead- times of breaks, lunch, the shop we have class in, outdoor activities ( such as time in the local boatyards and visiting other marine businesses).

Discussion about accreditation societies: SAMS and NAMS.

Discussion of yachts and small crafts we will inspect as professionals, including the vessel types we are less comfortable inspecting.

Methods of gathering and recording information on the inspected vessel.

Tools used in marine surveyor work.

Terminology of wooden and fiberglass vessels, big and small.

Understanding wooden boat construction.

Wood technology: types of marine woods, identification, selection, the cut of the grain and their uses.

Fastenings: kinds of metals commonly found, types of design, methods of selection, advantages and disadvantages of certain metals.

Fiberglass boat construction: their fiber attached parts and pieces, resins in the laminates, materials,

etc.

Questions for the end of the day.

Day 2

Review of Day One.

The Weathering Process: Understanding the beginning of deterioration in the marine environment caused by exposure to wind, rain, sea water and sun, the natural elements at work in a decay process.

Understanding fungi rot and other forms of wood deterioration, "nail sickness", and electrolysis activity.

Understanding corrosion of metals: in sea water, galvanic situations, and other forms of deterioration. There will be a hands-on inspection of all metals discussed.

Continuation of understanding of electrolysis activity, stray AC-DC current, and other types of electrical issues a surveyor may encounter.

Understanding Zincs: the process of sacrificial anodes.

Questions and answers; a sharing of ones experiences.

## Day Three

Meet at and tour Northwest School of Wooden Boatbuilding. We will be inspecting wooden small crafts of all kinds of construction: plank on frame, cold molded laminated hulls, fiberglass over wood, etc.

Lunch at Boat Haven, Port Townsend.

Begin the process of wooden and fiberglass boat examination: hammer tapping, selective probing, visual inspection, using our tools of the trade, hands-on inspection, and practice.

Observe repair procedures of cracked and broken frames, fastener failure, mechanical defects, fatigue of other metal parts and pieces, and fiberglass boat issues and repair processes. The opening up process for repairs is a process of discovery.

Repair procedures will be discussed with evaluation, critique, and wholeness; including discussion of alternative options.

End of Day

## Day Four

At shop, discuss the previous day regarding what we saw and learned at "Boat School" and in Boat Haven.

Review and comments on U.S. Coast Guard publication NVIC7-95, "Guidance on Inspection Repair and Maintenance of Wooden Hulls and their publication regarding fiberglass hull inspection.

Read and study numerous marine survey reports to see how other professionals present information they gathered based on their in-the-field observations. Their work product, and ours, is for the clients, marine lenders, insurance agents and underwriters, and other marine trade professionals.

Discussion on wordsmithing, choosing the correct sentence structure that states an opinion based on experience and knowledge. Some reports have been known for minimal content.

End of Day

## Day Five

Review of the week's activities and recap of the previous day.

Review of reference material students will use for "home study"; includes ABYC, NFPA, CFRs, price guides for estimating boat values, and other books and publications.

Theories and Practices of the Marine Surveyor/Inspector: Developing successful relationships with clients, boat owners, shipyard personnel, and other inspectors.

Knowing what we know with confidence. Appreciating what we know less about.

More thoughts on gathering information and observations.

Other topics of discussion we may not have mentioned or specialized topics an attendee might be curious about. This includes a talk on the caulking process of oakum or cotton on a plank on frame hull. This hands-on caulking demonstration is for all attendees.

Final review and time to share our new experiences.

Throughout the week guest speakers/presenters will attend and share their experiences as former students, marine surveyors, and other professionals in the marine trades.

Respectfully,

Lee H. Ehrheart Accredited Marine Surveyor #299