July 2007 Volume 29, Issue 7

The Binnacle

Victoria Model Shipbuilding Society
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Yahoo! Newsgroup : VIRCB
Vancouver Island Radio Control Boaters

STRAWBERRY SUCCESS!

Photos by **Mike Woodley**

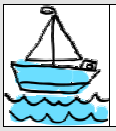
ON THE HORIZON

INFORMATION ON UPCOMING EVENTS

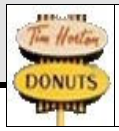
July 21	Luminera – Dave Denton
July 22	Boat-a-thon at Harrison 10 AM (food!)
August 4	Aircraft Museum display
Sept 1-3	Saanichton Fall Fair
Sept 15-16	Western Regional IOM Championship

MEETINGS: Second Thursday 7:15-9:15
313 Brunswick Place
Next is Aug 9th!

POWER: Sundays 10 – 12
Harrison Model Yacht Pond (HYP)
Dallas Road at Government.



SAILING: 1st and 3rd Sundays 1 – 3 PM
Beaver Lake
Next is July 15



LANGFORD LAKE NAVY
Wednesdays 9:30
Langford Lake, Leigh Rd at Trillium

From the Bridge

Strawberry Festival: it started very damp, but after 13:30 the sun came out and all was wonderful.
It was a good event, well attended by public and members alike and the ice cream and strawberries were delicious. Thanks to Saanich Parks and all participating members.

Breaking news: Mike Creasy will give us some scoop on scale speeds at our Thursday meeting.
Dave Denton

Photo by **Barry Fox**

Victoria Model Shipbuilding Society

General Meeting – 14 June 2007

Call to order: 7:15 with 24 members and 0 guest in attendance

1. The first Boat-a-thon was a success despite the weather and access problems due to Dallas Road closure
2. Next Boat-a-thon will be July 22 with chicken burgers and hamburgers. There will also be a Powell Cup style event for power boaters.
3. Need participants for Cowichan Bay boat festival as we get paid for this event.
4. There was a discussion about Luminara

Adjournment 7: 50

The rest of the event was a social event.

Ron H.

2007 Executive Committee

President: Dave Denton	***478-1800***
Vice-Pres: David Taylor	***652-6480***
Secretary: Ron Hillsden	***479-5760***
Treasurer: Tom Pound	***595-6487***
Show Coordinator: B. Andrews	***479-2761***
CRD Liaison: Ken Lockley	***477-5830***
Barry Fox	***294-0350***
Parks Liaison: Dave Denton	***478-1800***
Binnacle Editor: Bill Sturrock	***479-0239***
Quartermaster: Bob Rainsford	***383-2256***
Librarian: Rick Rainsford	***382-0898***
Sailing Director: Barry Fox	***294-0350***
Director at Large: Ken Scotten	***472-6187***
Director at Large: Ernest Reid	***652-8579***
Publicity: Dave Denton	***478-1800***

On June 17 at 3:00 in the afternoon Captin **Ron Armstrong** launched his 1/48 scale model of the famed Canadian Pacific Steamships SS Princess Maquinna at a private lake somewhere in the outskirts of Victoria. The event was witnessed by invited guests including several VMSS members. Princess Maquinna is built almost exclusively of tinplate soldered together (hence the moniker "Captin" for Ron.) The model is large and heavy, but subsequent sea trails have proven she performs well on the water. Congratulations to Ron for persevering with this large project!. Contribution by **Ron Hillsden.**

Editor: *I Need Help*

I am trying to calculate the scale speed of my new tug. Traveling at 10 knots the real tug would cover 10 nautical miles in 1 hour .

My model is 1/24 scale , so breaking that down to the 240 feet of Harrison Pond my boat should cover the distance in 5.7 minutes. I don't think my boat would raise a ripple at that speed ,when the full size boat would be putting up a wake that you could surf on. What's wrong with this picture ? Do we need to reduce the time by 1/24 ? No this would be hydroplane speed .

What part does density of water play in these mathematical gyrations ? We could throw in some cube root to really confuse the issue. My head is starting to hurt, I think I will go downstairs and glue something up .

Can someone shed some light on this for me ?

Dave Denton

VMSS MODEL BOAT PHOTOGRAPHY CONTEST

OPEN TO MEMBERS OF ANY MODEL BOAT CLUB

Just a few Rules:

1. Maximum of 3 entries per amateur-photographer/member: **DIGITAL (jpg) only!**
2. Send by email attachment to: **vmss@shaw.ca subject line: "PhotoContest Entry"**
3. Model ships and related topics only, please. **Limit of 3 entries** per person.
4. Deadline **November15th, 2007.**
5. Judges decision final; prizes to be announced at a later date in the Binnacle.

NOTE: It is intended that the top 12 BEST entries will be used in our VMSS Calendar for 2007. **Questions:** email to: vmss@shaw.ca

GOOD BOATING AND SHOOTING!!

Old Wood & Rusty Iron – *by Mike Creasy*
Size Matters

Before a recent meeting at the Naden museum, a few of us were standing in the parking lot above the Esquimault Graving Dock talking about the size of ships – trying to visualize the ***RMS QUEEN ELIZABETH*** as she looked for two weeks in 1942.

Her size is given as 83,000 gross registered tons and if memory serves, she was 1030 feet long. So, how does that compare with the big battleships of the time? ***BISMARCK*** was 820 feet long and about 55,000 tons displacement, while the American Iowa class were 890 feet and 52,000 tons displacement. Of course, what the ***MISSOURI*** carried in armour plate was likely matched by the ***QUEEN ELIZABETH***'s tonnage of silver plate, but still… if one of these monsters slipped off the keel blocks, which one would press you into a fossil??

Well, if you're under the QE and you hear the blocks groaning, pull out your tape measure. The bathroom scales won't do. You are about to be flattened by a VOLUME not a weight. That's right – tonnage as it applies to civilian ships is usually a measure of internal volume.

Tonnage is derived from the word TUN, which was originally a type of barrel used to transport commodities. A tun was defined as 100 cubic feet. The number of tuns a ship could carry was important to shipowners, insurers, taxation authorities and others. Over time, tunnage became tonnage, and the rush to confusion with weight was on.

In the early days of ship-borne transport when all ship were sail powered, it was enough to know the internal volume of a ship's hull as a means of deriving theoretical cargo capacity. In 1720, the Builder's Measurement Rule provided a simple calculation for deadweight tonnage based on length and breadth of a hull. This was replaced in 1854 with the Moorsom System, which is the basis for modern tonnage calculations.

Keep in mind that until 1876, ship owners were free to load their vessels until they wouldn't float no more. Samuel Plimsoll's marking system changed that, and it became important to have a good paper comparison of the capacities of various ships.

Deadweight tonnage (DWT) is the lifting capacity of a ship, minus the actual weight of the ship. DWT is often applied to bulk carriers like the big coal ships or oil tankers. You've probably figured out by now that a volume-based measure is used for merchant ships because the internal volume never changes, while a ship's carrying capacity in terms of weight will change with the density of the water and the quantity of fuel in the tanks, among other things. Naval ships don't use these measures because they don't carry commercial loads, using instead the displacement tonnage (DT or DisplT), which is similar (but not quite the same as) deadweight tonnage.

The Moorsom System had to be adapted in the late 1800s as sail ships began to give way to steam power, and the calculation of internal volumes had to be modified to account for engines and fuel.

Gross Register Tonnage (GRT) was the measure of total internal volume of a vessel (with some exceptions) while Net Register Tonnage (NRT) was the GRT minus all the non-cargo volumes. Both these terms are now obsolete, having been replaced in 1994 by the calculations for Gross Tonnage and Net Tonnage.

In all but DWT and DT, the ton is still the equivalent of 100 cubic feet – a measure of volume, not weight.

Now, for all you students of physics (or anyone else who has tried to bring a ship alongside). Ships have weight. Together with speed, weight produces momentum. Momentum is that which changes the shape of wharves and shell plates after the propeller has exhumed Jimmy Hoffa from the harbour muck.

Speed is fairly well understood; for docking manoeuvres there is dead slow, full astern and "oh my goodness". The heavier the ship, the lower the speed at which "oh my goodness" occurs. Now, you might use a slightly different phrase aboard your admiral's barge but the impact, so to speak, is the same.

As we've seen, weight is less well understood. Actual weight is what matters, not tonnage as a measure of volume.

A ship's actual weight – if you could get it on the bathroom scale - is the equivalent to the amount of water it displaces with its hull. Ship designers generally calculate this volume for different draft depths and convert to weight – thus producing a table unique to each ship, for any given loading condition.

This actual weight is the one that contributes to momentum – and it's what matters when you hear those keel blocks creaking……

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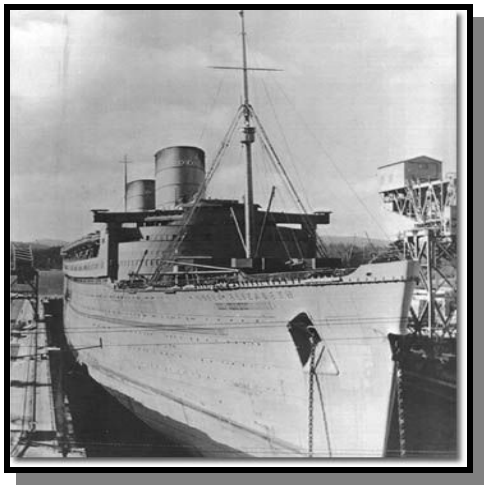

	Launched	Displacement	GRT		Length	Width	Draft
Queen Elizabeth	1938	81,000 tons	83,000 tons		1,030	118	38
QE 2	1967	48,923 tons.	70,327 tons		963	105	32
Queen Mary 2	2003	76,000 tons	151,400 tons		1,132	135	33
Bismarck	1939	55,000 tons	n/a	820	118	32	
Missouri	1943	52000 tons	n/a	890	108	36	

THE SUB SUBJECT

PART V (of V)

Back in March, I started this five-part series toward answering this one (but broad) question: "How to go about acquiring/building R/C boat or ship models?"

On the "building" front, I can't add much to what I've already reviewed, i.e. scratch build from available materials and manufactured apparatus, buy a complete or partial (basic) or finish or rebuild another modeler's abandoned or failed project. All of these possibilities have been explored over the past four months. Adding more could lead to outright full-bore boredom. So for beginners at least, there are a few things to bear in mind to dodge frustration.

No matter how green a greenhorn attracted to the idea of building an operating model may be, such individual should take cool and hard-nose stock of the Skills, Patience and Money (SPM in naval speak?) that will become crucial in even the most basic modeling process. Beyond "SPM", these eight specifics come to mind...neither in alphabetical or order of importance:

1. WORKING WITH TOOLS

One must have the ability to work with simple hand tools, as well as with basic power tools, and have knowledge of the characteristics of the materials that will become involved in the construction, modification and, later, repairs of an existing or model to be. Hammers, saws, screwdrivers, pliers, et-, et– and et cetera, plus sander, drill press, reciprocating jig saws and such are a bit of a starter.

2. WIRING—ELECTRICITY

Must know something about batteries, positive and negative, voltage and amperage, and know what to connect to what, and how.

3. SOLDERING

That in itself is quite a field/discipline. What iron and which solder to use, for what, where and when? Better know those basics or get good at them before any keel is laid. Total cosmetic perfection is not necessarily called for, but lasting strength should be a kind of total and ultimate goal.

4. GLUING

Oh boy. There are so many glues...mostly good ones... but, which ones to apply to which materials, and how and when? Unless one has a (specialized) degree in chemistry, frequent discussion with and advice from peer modelers and expert sales personnel will be needed.

5. MECHANICS

Bolts and nuts (stainless, of course), levers, linkages are major presences in model boats...even bigger in model submarines than in skimmers. Just contemplate this: retractable bow planes, on ONE servo.

6. PAINTING

Ah, yes. The frosting on the bird is represented by its feathers. Dubro and Dupont can lend a hand, but one still has to know what to buy and how to smear it on. And never mind special effects such as rusting, weathering or applying preprinted numbers, emblems or symbols. Clothes may make a man, but a nice paint job makes a model.

7. PATIENCE

It takes a certain bent of character (regardless of skills) to figure out a better way to do anything and, if necessary, to reconfigure and rebuild the same (even minor) component as often as it takes to meet an either needed or self-imposed standard. Exasperation precedes success.

8. WORKSPACE

It's amazing what some hobbyists can achieve on the kitchen table, an ironing board, a balcony or in poorly lit, or otherwise inauspicious venues. Still, all the same, a permanent workshop with a permanent place for tools, equipment and materials sure makes the hobby a greater setting to practice and enjoy the work. Also, it can save armloads of so-called spare time.

A reader should not conclude that the foregoing requisites apply solely to scratch builders. No, no. They are just as valid for kit builders and off-the-shelf buyers.

Now a few words about ship, boat, airplane and model car aficionados (or prospective ones).

It is remarkable how defined the internal differences between all those classes of specialized hobbyists are. There are those dedicated to building; there are those dedicated to operating/running. Flat-out "builders" often lose interest in "operating". They'll shelve, sell or give away their model in a short few months or a season or two. Others are destined to run, improve, refit and restore their pride and joy for short eternities. Personally, I'm very much in the middle mote...with a marginal predilection for running my models. That, I suspect, may be because they're all subs. Subs operate three dimensionally and have little reliance on wind and weather. As an added bonus for those with an ego or those who welcome flattery: subs draw lots of interest and compliments from spectators.

Now, after reading, contemplating and digesting most of the foregoing: make your decision on how to go about getting in on the on or below surface hobby. Should you opt for the second category, keep it simple at first. Start with a dynamic diver without ballast tank. That, a so-called "static" diver, can follow later.

I am a tad uncertain about next month. Most all likely though, I'll write about **Scott Munford,** our newest bubblehead at HMYP, and his sophisticated model of a Japanese, state-of-the-art, diesel-electric. I marvel at what fine workmanship and systems design reside in that kit.

Romanus Unicum

Scott Mumford's Oyashio model.

Cloning a New Rudder (the hard way)

During a holiday visit to LA, we were having lunch in a harbour-side restaurant in San Pedro, CA, where we could see the ship traffic in the channel to open water. (Although San Pedro is south of LAX, it is connected to the City of LA by a narrow strip of annexed property that makes it officially the Port of Los Angeles, while lying just next door to Long Beach!).

In the middle of eating my Cobb Salad, what do I spot but a Foss tug! I grabbed my camera and got two shots before it was out of sight of our table. Of course, when I morphed my Shelly Foss kit into the Point Fermin, I could not see below the waterline.

Fortunately, our good friend, **Ron Burchett**, came to the rescue with the actual plans which show the Fermin has three rudders.

So here's how I made the third rudder, which I suspect was a late-in-life modification to compete with the newer Cort nozzles.

1. First, build a mold, Figure 2, with one of the original wooden rudders as a pattern and its shaft as a tooling fixture. The sprue lets the air out as the casting resin is poured into the fill hole: both (sprue and fill) are temporary pieces of wood dowling.
2. Pour and cure each plaster half separately, with a bit of vaseline on the lower half for easy release of the upper half.
2. Re-assemble after cured and clamp the two plaster halves together (sans dowling) with the new shaft installed to the correct depth. It should have a couple of pieces of brass soldered on to give more bonding area.
3. Pour the plastic casting resin (with optional coloured dye) until it comes out the sprue.
4. Cure, disassemble and trim new shaft to proper length.

(**Ken L.** said "carve another wooden one": this was more fun!)

Bill Sturrock

Point Fermin (Foss) tug in San Pedro, CA.

Figure 1. Point Fermin with Shelley Foss (Dumas) kit twin rudders.

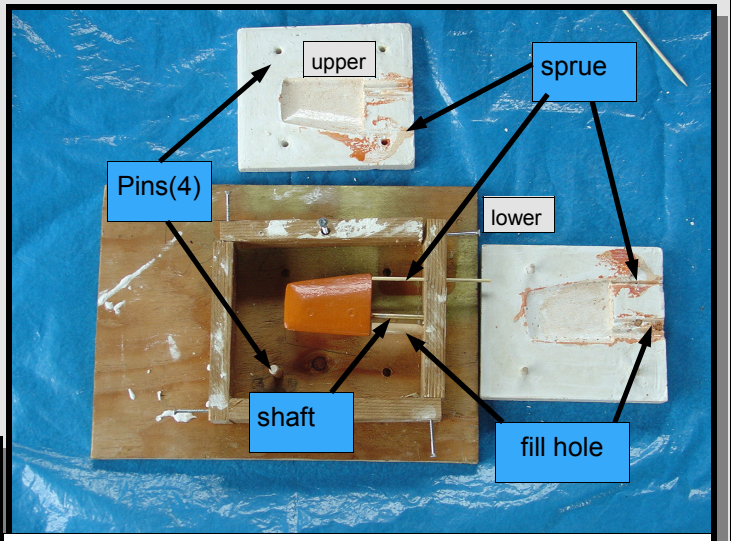

Figure 2. Plaster pattern box showing sprue (air vent), index pins (4) and fill hole.

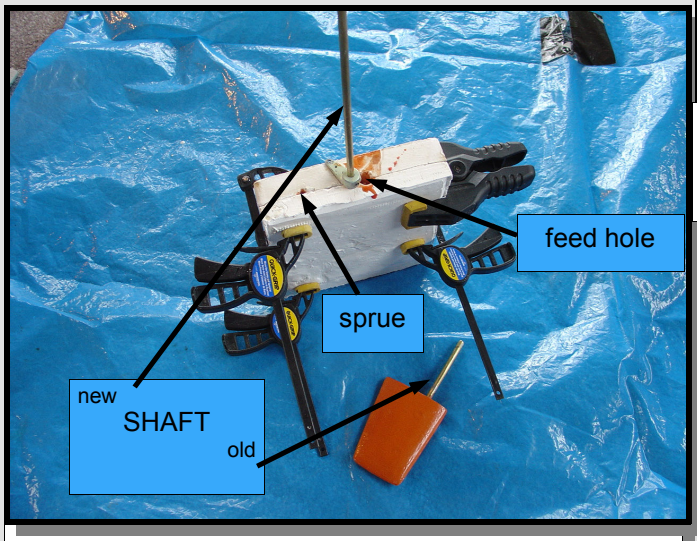

Figure 3. Plaster mold after pour and original rudder.

Figure 4. New resin rudder installed.

Sailing Tacks for June

Sailing For July

When you sail competitively it is usually best if you stay in phase with the wind everyone else is in. For us this year we have been very fortunate to be "in phase" with the weather and continue to enjoy real nice winds on our sail days. We had a few soft moments this last time but they didn't last long and we were back to good sailing.

Things have calmed down a bit the last month or two after a very hectic spring. I think things will pick up again in the fall with the IOM Regional here in September and a rumoured Soling Regional in Nanaimo in October. In addition we have started lining up the Spring Series and it is already expanded by 1 event so far with a good chance of one more yet. Next spring we will venture off the Island to Vancouver and maybe also to Kelowna as interest in the series concept continues to grow.

The blue boat is Ernie Reid's recently completed IOM.
Photo by **Barry Fox**

So on the topic of the Western Regional, I am looking for somewhere between 3 and 6 people to actually run the event once it gets started. I already have one or two folks stepping up but still need a couple of more. What I want to try to avoid is having to use anyone who has an IOM to sail so that we can maximize our entry. So if you can spare September 15th & 16th please let me know as soon as you can so I can start getting the team together and work out who will do what and how that all happens.

I will need a rescue boat operator, a scoring person and someone to act as the Race Director at a minimum. All of those jobs just require some good common sense to do them and that description fits most of you so think about it and let me know

Ken Lockley and I did a quick fix on the rescue boat trolley a couple of weeks ago that involved putting three new wheels on it. We opted for wheels that actually had tires still on them as opposed to the ones we had which had lost varying amounts of their tread. It rolls very nicely again.

We should do a little maintenance on the rescue boat one day to fix a couple of small cracks in the fiberglass along the sides near where the oars are fitted. Mind you I much prefer to use Dave's motor and then the strength around the oar locks isn't an issue at all!!

For the balance of the summer we will be sticking to our regular sailing schedule with maybe a special trip or two to some of our neighbouring sailing venues. We have standing invitations to join the folks at Nanaimo and Saltspring nearly anytime we want to go so you will see messages from me later this month to try to arrange some car pools to go to those places.

See you on the water.
-Barry