



San Diego Ship Modelers' Guild

Vol. 4 Number 5

May 11, 1980

Notes From April Meeting

Concerning the Langley project, Andy Anderson will soon return the plans and photos we've so despritley needed. Also Captain Fredrick has provided an article from the Naval Institute proceedings with many photographs and a wealth of information. It really is coming together. Part of the meeting was devoted to preparations for the show on the Berkley. The remainder of the meeting was a presentation by Dave Bryerly, formerly of Mystic Seaport and now with the San Diego Maritime Museum. Although the show dealt briefly with Crabtree collection as previously indicated in the Newsletter, it was mainly depicting the changes over the last ten to fifteen years of Mystic Seaport. An excellent presentation containing a great deal of information. Many thanks to Dave. There were very few models present, so lets see a few more this next meeting.

Models Present:

Doug McFarland	Norske Love	Kit plank hull
Doug McFarland	Santa Maria	Kit plank hull

Static Display Contest Results

Fifteen models of excellent quality and variety made up the first annual Static Display Contest on the Berkley. Thanks to Doug McFarlands efforts in the publicity department via radio and newspaper we had a good percentage of models entered from non-members of the Guild. And the winners are:.....

Best Overall

Bob Pranka Leon

Sail

1. Bob Pranka	Leon
2. R. Boerner	Will Evergard
3. Bob Crawford	Star of India
4. Doug McFarland	Santa Maria
5. Charles Zellmer	Constitution

Naval

1. R. Boerner	USS Sagamore
2. John McDermott	HMS Lion
3. Vic Smith	PT 100

Non-Military

1. Val Peterson	Arapaho
2. Bill Benson	Roseville
3. Bob Crawford	Whale boat
4. Earl Schweizer	American Scout
5. Vic Smith	Fire boat

Special Award

Vic Crosby Ships-in-bottles collection

Thanks to all who participated and we'll see more of you next year.

California Cruise

Doug McFarland would like to remind everyone that the annual California Cruise will be August 16th, which is the nearest Saturday to a full moon. Mark your calendar and reserve your place early.

May Meeting

The May meeting will feature a presentation on wood preparation and finishing by Bob Crawford. I don't profess to know all, and therefore will appreciate some input at the meeting. If you've got some tips or a product you feel is beneficial bring it and share it. We'll try a little different format this time, and make this a symposium type of an affair. Many of the tips that I have have been passed on to me by Horace Rost, the sign painter from Shelter Island Sign Shop behind the Gray Whale shop. Hope to see you Friday night.

Just Off the Ways

Model's Name: Lauren Allison Ross
Builder: Mr. and Mrs. Bob Ross
Launched: April 25, 1980
Displacement: .003664 tons
Daughter is doing fine, there is no word on the parents.

Rigging and Scales

The final four pages of the Newsletter were provided by Ed White and are taken from the Nautical Research Guild.

SAN DIEGO SHIP MODELERS GUILD
Elected Officers
1980

Master Doug McFarland /redacted/
Masters Mate Al Lheureux /redacted/
Logkeeper/Purser Bob Crawford /redacted/
Steering Committee Doug McFarland /redacted/
Al Lheureux
Bob Crawford
John Woodard
Bob Ross
Earnie Jimenez

Meetings: 3rd Friday of each month at 8:00 PM aboard the Star of India -Orlop deck.

Membership: \$6.00 per year for members of the Maritime Museum Association of San Diego, \$12.00 for all non-members. Out-of-state residents may join for \$6.00.

The Guild was founded in 1971 by Bob Wright and the late Russ Merrill.

Model Yacht Builder Has It Together

By Mark Putnam

If you figured it out on a calculator it would only come to around two inches per year. But if you look at it in person, it's hard to believe Lakeside's Robert Pranka completed his 23-inch model of the brigantine *Leon* in 11 years.

And there's more to model ship building than the plans call for.

Pranka for instance invented custom tools, techniques and what have you

It was 110-feet in length, with a 28-foot beam, and drew 13 feet with its displacement of 302 tons.

After 34 years of service, the vessel sunk on October 30, 1915, while taking a load of coal from Granton to Pors-Grunde, Norway.

Pranka has revived the spirit of the old vessel with his beautiful model.

Many different woods have been used on the replica *Leon*. The frames,

"Patience doesn't really have much to do with this type of project...if you desire ships, and I've always been fascinated by them, then none of this is boring...it's all enjoyable," he said.

Pranka installed the rigging to scale, but also served the rope "to keep it from chafing" like real ships do.

Again he had to invent a special tool to serve the tiny wire.

Pranka won a recent contest at the *Star of India* for overall excellence.

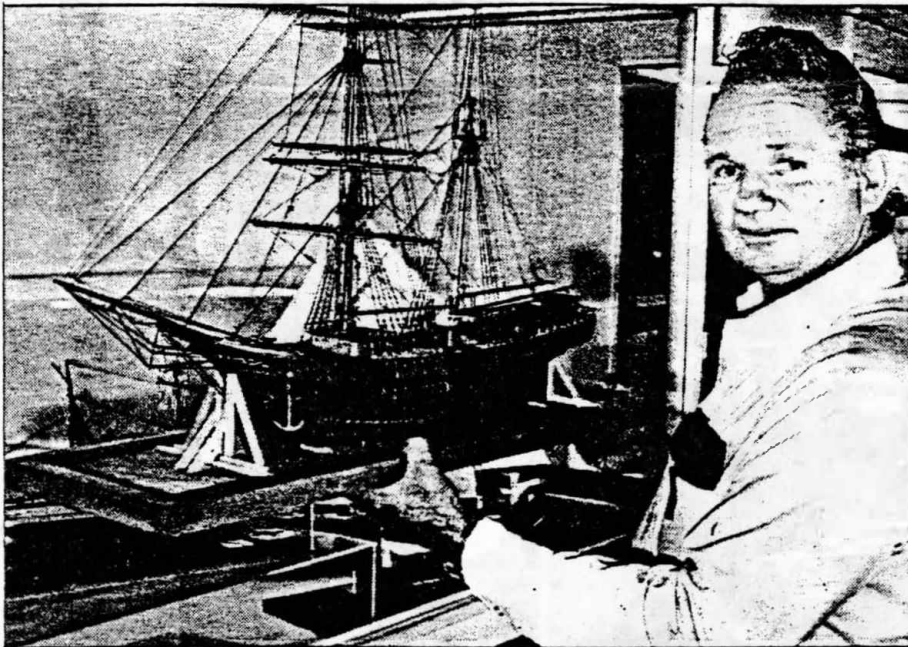
He says the award didn't mean as much as the satisfaction he said he gets from knowing he made the vessel with his own hands.

"I've had friends come back from the Smithsonian and tell me they've never seen anything better," Pranka said.

Though he has kept no log of how many hours he put into building this ship, Pranka said the materials didn't cost much over \$100 during the past 11 years.

Inflation has really paid off big as far as the monetary value today of the ship.

Of course, to Pranka, *Leon* is priceless.



Staff photo by Bob Covarrubias

Robert Pranka displays his model of the brigantine *Leon*.

as the need arose while building the ship.

Inspired by the well known model ship builder Ron Cleveland, Pranka first viewed a model of *Leon* at Cleveland's Los Angeles home back in 1968.

"I took one look at that thing and I couldn't wait to get home and start building it," said Pranka.

Well it took a little more than just going out and buying a set of Harold Underhill's plans.

Pranka had to scale the plans up to 3/16 of an inch per foot to get the proper scale he desired.

"I strayed from the plans and scaled it up. I wanted detail, and I wanted absolute perfection," he said.

The original *Leon* was a Norwegian-built vessel, built in Laurvig, Norway in 1880.

Pranka said, were made of Swiss pear wood.

The model is decked and planked throughout with cherrywood, and the stanchions are box wood.

Pranka said he had a trick to make each stanchion identically alike. He made a special tool from a hacksaw blade which ensured identical copies of each stanchion.

One of the most interesting aspects of this project was the tools Pranka made up.

"Sometimes now, I try to think back and ask what I used some of these tools for, and I say to myself 'What the devil did you do that for?'"

Also on the model *Leon* is ebony and white wood.

Pranka said the actual hull construction was interesting. In fact, he said all aspects of the project were enjoyable to him.

Preserving Boating's Past

"An hour spent looking at our models here at the Maritime Museum is like a two-century tour of the world," says the museum's curator of models, Bill Benson. Benson, 53, has been building and restoring models for the museum since 1962. That was the year he retired from a long career in the Navy during which he had been a submarine skipper and an intelligence specialist.

For the past three years, his days have been spent aboard the old ferry boat *Berkeley*, moored next to the *Star of India* at the Embarcadero. His office and workshop are a part of the museum, so he is in a position to hear comments made by people inspecting his incredibly accurate creations.

"Boys and girls seem to be most impressed by the models," he says. "And, of course, men who have spent time at sea."

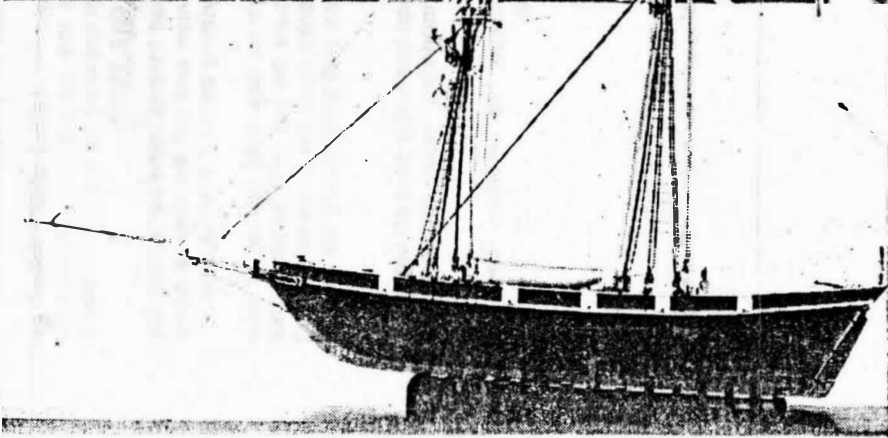
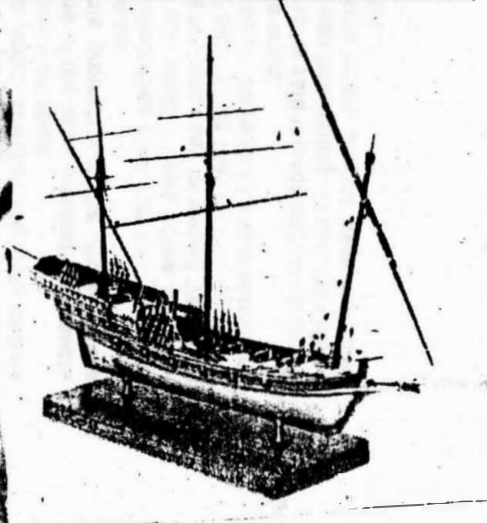
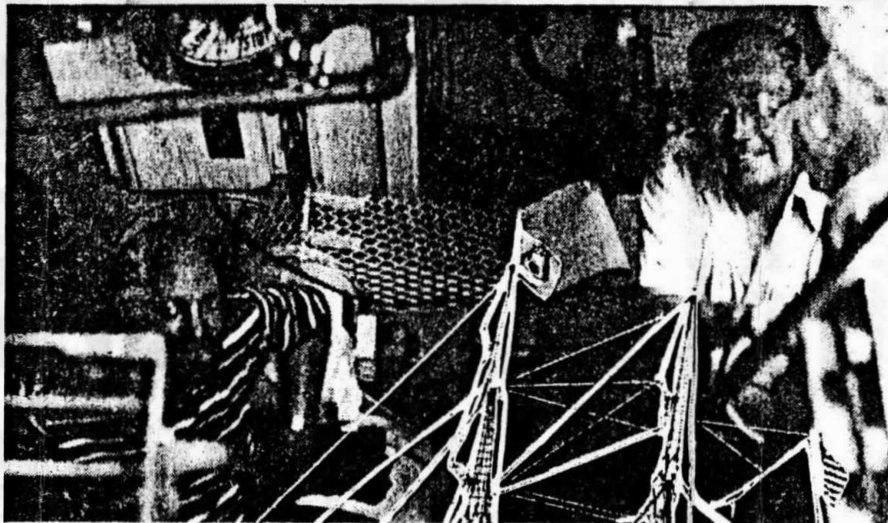
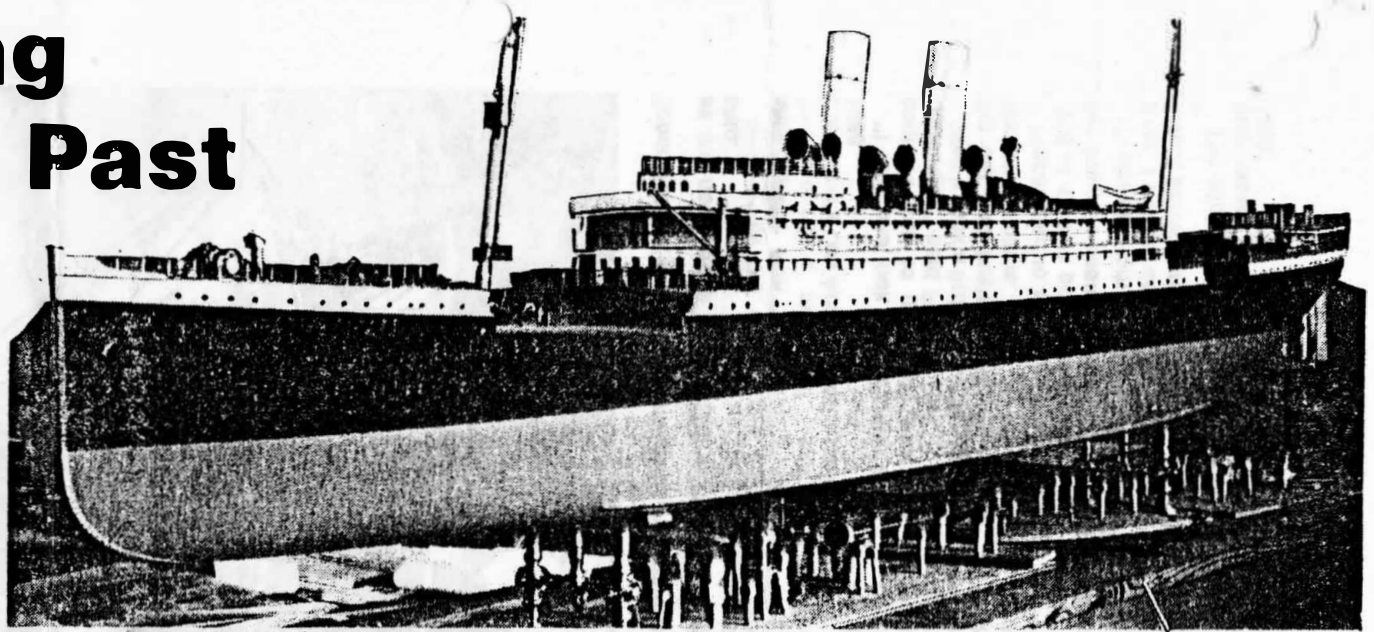
Benson also builds models professionally. He built the first tank test model of *Intrepid* in 1973. Since then, he and his partner, Bob Crawford, have been earning their livings constructing models whose designs and purposes vary.

"The old Clipper ships are the hardest," says the veteran model builder. "The Clippers were the epitome of the sailing machine — big, with an awful lot of tackle involved. The original ships' fine craftsmanship with hand carvings and all is tough to reproduce, but building them is fun."

Bill Benson still has the first model boat he ever built. He was nine years old in 1937 when he built a very small model that, today, he knows is in desperate need of repair. "I'll get around to that one of these days," he says.

"Ever since I built the first one, I have always had at least one model under construction," he says proudly. "Even when I was a submarine skipper, I was building models in my stateroom. I built them aboard my ship off the Vietnam coast. And, in fact, when I go home at night, I work on some models."

Bill and Bob are adamant about their job and hobby. Both have considerable education. Bob holds degrees in psychology and recreation, while Bill, a Phi Beta Kappa and marine engineer, also holds a degree in international relations. Neither will even speculate what he would be doing if not building models.



"I know one thing," says Bill. "I'd be very unhappy."

The work done by these two extraordinary men must be seen to be appreciated fully. The detail can be overwhelming. Bob Crawford works out of a small shop on Shelter Island across from the Half Moon Inn where he constructs models of real yachts for their owners. "A lot of folks enjoy an exact replica of their boat in their home or office," he says.

Both men have hearts and minds full of days past, but also have a keen eye for the realities of our time. "We've sold models for many thousands of dollars and have refused many thousands more. And we'll keep doing it eight to 15 hours a day until we just can't move any more."

SCALE CONVERSION CHART

N.R. COLE

Actual	1/4"	3/16"	1/8"	Actual	1/4"	3/16"	1/8"	Actual	1/4"	3/16"	1/8"
1/16"	.0013	.0009	.0006	21'	5.25	3.9375	2.625	61'	15.25	11.4375	7.625
1/8"	.0026	.0019	.0013	22'	5.50	4.125	2.750	62'	15.50	11.625	7.75
1/4"	.0052	.0039	.0026	23'	5.75	4.3125	2.875	63'	15.75	11.8125	7.875
3/8"	.0078	.0058	.0039	24'	6.00	4.50	3.00	64'	16.00	12.00	8.00
1/2"	.0104	.0078	.0052	25'	6.25	4.6875	3.125	65'	16.25	12.1875	8.125
5/8"	.0130	.0097	.0065	26'	6.50	4.875	3.250	66'	16.50	12.375	8.25
3/4"	.0156	.0117	.0078	27'	6.75	5.0625	3.375	67'	16.75	12.5625	8.375
7/8"	.0182	.0136	.0091	28'	7.00	5.25	3.50	68'	17.00	12.75	8.50
1"	.0208	.0156	.0104	29'	7.25	5.4375	3.625	69'	17.25	12.9375	8.625
2"	.0416	.0312	.0208	30'	7.50	5.625	3.750	70'	17.50	13.125	8.750
3"	.0625	.0468	.0312	31'	7.75	5.8125	3.875	71'	17.75	13.3125	8.875
4"	.0833	.0625	.0416	32'	8.00	6.00	4.00	72'	18.00	13.50	9.00
5"	.1041	.0781	.0520	33'	8.25	6.1875	4.125	73'	18.75	13.6875	9.125
6"	.125	.937	.0625	34'	8.50	6.375	4.250	74'	18.50	13.875	9.250
7"	.1485	.1093	.0729	35'	8.75	6.5625	4.375	75'	18.75	14.0625	9.375
8"	.1666	.125	.0833	36'	9.00	6.750	4.50	76'	19.00	14.25	9.50
9"	.1875	.1406	.0937	37'	9.25	6.9375	4.625	77'	19.25	14.4375	9.625
10"	.2083	.1562	.1041	38'	9.50	7.125	4.75	78'	19.50	14.625	9.75
11"	.2291	.1718	.1145	39'	9.75	7.3125	4.825	79'	19.75	14.8125	9.875
12"	.250	.1875	.125	40'	10.00	7.50	5.00	80'	20.00	15.00	10.00
2'	.50	.375	.250	41'	10.25	7.6875	5.125	81'	20.25	15.1875	10.125
3'	.75	.5625	.375	42'	10.50	7.875	5.25	82'	20.50	15.375	10.250
4'	1.00	.750	.50	43'	10.75	8.0625	5.375	83'	20.75	15.5625	10.375
5'	1.25	.9375	.625	44'	11.00	8.250	5.50	84'	21.00	15.75	10.50
6'	1.50	1.125	.750	45'	11.25	8.4375	5.625	85'	21.25	15.9375	10.625
7'	1.75	1.3125	.875	46'	11.50	8.625	5.75	86'	21.50	16.125	10.75
8'	2.00	1.500	1.00	47'	11.75	8.8125	5.875	87'	21.75	16.3125	10.875
9'	2.25	1.6875	1.125	48'	12.00	9.00	6.00	88'	22.00	16.50	11.00
10'	2.50	1.875	1.250	49'	12.25	9.1875	6.125	89'	22.25	16.6875	11.125
11'	2.75	2.0625	1.375	50'	12.50	9.375	6.25	90'	22.50	16.875	11.250
12'	3.00	2.250	1.50	51'	12.75	9.5625	6.375	91'	22.75	17.0625	11.375
13'	3.25	2.4375	1.625	52'	13.00	9.750	6.50	92'	23.00	17.25	11.50
14'	3.50	2.625	1.750	53'	13.25	9.9375	6.625	93'	23.25	17.4375	11.625
15'	3.75	2.8125	1.875	54'	13.50	10.125	6.75	94'	23.50	17.625	11.75
16'	4.00	3.00	2.00	55'	13.75	10.3125	6.875	95'	23.75	17.8125	11.875
17'	4.25	3.1875	2.125	56'	14.00	10.50	7.00	96'	24.00	18.00	12.00
18'	4.50	3.375	2.250	57'	14.25	10.6875	7.125	97'	24.25	18.1875	12.125
19'	4.75	3.5625	2.375	58'	14.50	10.875	7.250	98'	24.50	18.375	12.25
20'	5.00	3.750	2.50	59'	14.75	11.0625	7.375	99'	24.75	18.5625	12.375
				60'	15.00	11.25	7.50	100'	25.00	18.75	12.50

CONVERSION CHARTS

Conversion charts simplify the task of scaling. I used to spend quite a bit of time on mathematics when converting to scale, then I simplified the task by preparing the chart shown. Thus conversion becomes a simple matter of breaking the actual dimensions into components and adding the scale equivalents.

Example: When 1/4" represents 1 foot, 36' 10 1/2" becomes,

$$\begin{aligned}
 36' &= 9.000'' \\
 10'' &= .2083 \\
 .5'' &= 0.104 \\
 \hline
 &= 9.2187
 \end{aligned}$$

TABLE OF DECIMAL ROPE SIZES IN THOUSANDTHS OF AN INCH
 Prepared for the Use of the shop modelmakers of the Nautical Research Guild.
 by Thomas Hornsby 1955

Rope Diameter	Rope Circumference	Type	1/16" Scale	1/8" Scale	3/16" Scale	1/4" Scale	3/8" Scale
1/2	1.57	Rgt	.003	.005	.008	.010	.016
3/4	2.36		.004	.008	.012	.016	.023
1	3.14	Right or Left Hand	.005	.010	.016	.021	.0312
1 1/4	3.93		.006	.013	.020	.026	.039
1 1/2	4.71		.008	.016	.023	.031	.047
1 3/4	5.5		.009	.018	.027	.036	.055
2	6.28		.010	.021	.031	.042	.062
2 1/4	7.07		.012	.023	.035	.047	.070
2 1/2	7.85		.013	.026	.039	.052	.078
2 3/4	8.64		.014	.029	.043	.057	.086
3	9.42		.016	.031	.047	.062	.094
3 1/4	10.21		.017	.034	.051	.068	.101
3 1/2	11.	.018	.036	.055	.073	.109	
3 3/4	11.78	.019	.039	.059	.078	.117	
4	12.57	Left Hand	.021	.042	.062	.083	.125
4 1/4	13.35		.022	.044	.066	.089	.132
4 1/2	14.14		.023	.047	.070	.094	.14
4 3/4	14.92		.025	.049	.074	.099	.148
5	15.71		.026	.052	.078	.104	.156
5 1/2	17.28		.029	.057	.086	.115	.171
6	18.85		.031	.062	.094	.125	.187
6 1/2	20.42		.034	.068	.101	.135	.203
7	22.		.036	.073	.109	.146	.218
7 1/2	23.56		.039	.078	.117	.156	.234
8	25.13	.042	.083	.125	.167	.25	
8 1/2	26.70	.044	.088	.133	.177	.265	
9	28.27	.047	.094	.140	.188	.281	

The table is, I believe, self-explanatory, of course the circumference of the rope sizes have to be converted back to diameters in order to make use of the micrometer readings. The figures have been carefully checked on a calculating machine, and where the decimal parts have been over a half they have been made a whole number.

No inbetween or bastard size scales have been included in the table, but these can be read almost at a glance by interpolation. If your scale is 3/32 of an inch, and you want to know the size of a 6 inch rope, then one half the difference of the sizes given for 1/16 inch and the 1/8 inch, added to the 1/16 size will give .016; or simply subtract 25 per cent of the figure for the 1/8 inch scale (1/32) and the result will be the same. The table furthermore, reads only to about a 26 or 27 inch cable since I have not been able to find a record of anything larger.

Material suitable for rigging purposes is rather hard to come by, particularly since the last war. Most modelmakers in this country seem to prefer linen, while those in England seem to make out well by using cotton. Some domestic flax is grown in this country, much of it in the Willamette Valley section of Oregon. The amount of costly and tedious labor necessary to produce a fibre comparable to the imported variety, prevents any widespread development of this crop. Imported threads are generally considered superior, and practically no equipment exists in this country for spinning fine threads. The small demand for fine threads in this country is supplied almost entirely by imports from the linen producing countries of Europe.

Rope while cylindrical, is not really a true circle in cross section, since it has a maximum and a minimum diameter - but, for our purposes, and in order to make use of a more accurate method of scaling rigging sizes, we must assume it is. It has been said, rightly or wrongly, that the human eye cannot detect differences smaller than .006 of an inch, and actually the fingers are a more reliable guide to thickness of small material such as rigging line to be used on ship models. By the use of a micrometer, which need not be an expensive one, and a prepared table of rigging sizes converted to decimal sizes for the scale employed, we can achieve extremely close tolerances in our rigging work. I do not claim that the idea is original, since it has been published before, but it is not generally known, and to most of our members it should present a new concept of accuracy.

In 'miking' the rigging material, some standard practice should be adopted, for the reason that thread and small line is compressible, and several different readings can be obtained according to the pressure applied against the micrometer anvil. My own practice is to get the decimal size of the material by allowing a piece of it to just stay in the micrometer by its own weight. I have made some small experiments in sizing rigging in its original state, after eyeing, after waxing, and so forth, and in all cases slightly different readings can be obtained. Whether or not you adopt the method I mentioned, try and get the same touch in measuring your rigging line.

By this method, if you should decide to adopt the practice, all guesswork, is eliminated and the old advice contained in so many books on model work, 'when in doubt as to the correct rigging size, always use the smaller one' will no longer apply.

A word or two now about blocks and their relationship to rigging. For general purposes, blocks should be three times as long as the circumference of the ropes rove through them. There are several small exceptions to this rule, but the main one for the modelmaker's guidance, is the fact that brace blocks should be four times the rope circumference. If attention is paid to this rule, the blocks will give the size of running rigging, and conversely, the rope will give the size of the blocks. The length of the block is the length of the shell or cheek piece.

It is doubtful if rope larger than 10 inch was ever rove off through blocks, and this use would have been restricted to extremely heavy purchase blocks such as would be used for the jeers of ships of the line. Brady's tables give no blocks larger than 22 inch, and Hamersly mentions that the range of blocks used by the U.S. Navy ran from 4 to 22 inch. In the table below, the rule of circumference to block length varies as the rope increases in size, but in the middle range, where most of the blocks sizes would be used, the rule follows rather closely.

U. S. NAVY BLOCK AND MANILLA ROPE SIZES

<u>CIRCUMFERENCE OF ROPE</u>	<u>SIZE OF BLOCK</u>	<u>DIAMETER OF SHEAVE</u>
1-3/4	4	2 1/2
2	5	3
2 1/4	6	3-7/16
2 1/2	7	3-7/8
3	8	4-3/4
3 1/2	10	5-5/8
4	12	6-3/8
5	14	7-3/4
6	16	9
7	18	10
8	20	11
10	24	13

GANG OF STANDING RIGGING OF AMERICAN HEMP
 Supplied to a new 1000 ton ship in October 1862, identity unknown

<u>CIRCUMFERENCE</u>	<u>PURPOSE</u>
9 $\frac{1}{4}$	Fore & Main Rigging; Fore & Main Topmast Backstays
8 $\frac{1}{4}$	Fore & Main Stays
7-3/4	Fore & Main Topmast Stays
7	Mizzen Rigging, etc.
6 $\frac{1}{4}$	Mizzen Topmast Backstays, Fore & Main Topgallant Backstays
6	Tye, Runner & Fish Pendant
5 $\frac{1}{2}$	Jib Stays, Guys, etc.
5	Lower Lifts (for three yards)
4-3/4	Lanyards
4 $\frac{1}{2}$	Fore & Main Royal Backstays
4 $\frac{1}{4}$	Mizzen Topmast Rigging, etc.
4	Fore & Main Topgal't Stays; foot ropes, etc.
3-3/4	Fore & Main Topgal't Rigging, etc.; strapping.
3 $\frac{1}{2}$	Mizzen Lanyards
3 $\frac{1}{4}$	Topgal't Backstay Lanyards; strapping
3, 2-3/4, etc.	Strapping.

GANG OF RIGGING FOR THE 400 TON BRIG "LIGE HOUGHTON" OF PORTLAND, MAINE, 1865*
 This vessel was built by E. Russell at Pembroke, Maine & owned by J. S. Winslow.

STANDING RIGGING OF AMERICAN HEMP

<u>CIRCUMFERENCE</u>	<u>PURPOSE</u>
7	Fore & Main Shrouds & Fore Backstays
6-3/4	Foremast & Foretopmast Stays
6	Main Stays
5 $\frac{1}{2}$	Topgal't Backstays, Jib Stays, etc.
4-3/4	Topgal't Stays, etc.
4 $\frac{1}{4}$	Royal Backstays
4	Topmast Shrouds & Lifts, strapping
3-3/4	Lanyards
3 $\frac{1}{4}$	Lanyards, Topgal't Shrouds & Lifts, strapping
3	Strapping, etc.
2-3/4	Lanyards, strapping, etc.
2 $\frac{1}{2}$, 2 $\frac{1}{4}$, 2	Strapping, etc.

RUNNING RIGGING OF MANILA.

<u>CIRCUMFERENCE</u>	6 $\frac{1}{2}$	4 $\frac{1}{2}$	4	3-3/4	3 $\frac{1}{2}$	3 $\frac{1}{4}$	3	2-3/4	2 $\frac{1}{2}$	2 $\frac{1}{4}$	2	1-3/4	1 $\frac{1}{2}$
<u>QUANTITY</u> (fathoms)	60	75	90	90	100	100	200	300	300	300	400	300	150

John Woodard, Chairman for the Static Display Contest and the Radio Control Regatta has presented this in regards to the September Regatta.

GET READY FOR THE REGATTA

Start planning now for our annual fall regatta.

New ideas are in the wind. The primary event will be an obstacle course, modified with new ideas, more about those later. Other events will include bollard pull tests for tugs, blind piloting, predicted log, and others.

The winner of the grand prize will be that modeler who enters the model which most closely represents its prototype physically and in operation and who is able to operate his model in the most seaman like manner. The course will be set up to represent a measured mile, channel, turning basin, and dock/pier/slip. The operator and model will be judged on the ability to operate his model at max scale speed through the measured mile, maneuver through the channel, make a landing and get under way from the dock/pier/slip (whichever is appropriate for the type of vessel), and return to the starting point through the channel. There will be no time requirements on this event. In addition to the operation, the model will be judged in accordance with the static scale criteria; documentation, accuracy of scale, finish, and special capabilities.

The bollard pull event will be open to any towing type vessel. The winner of this event will be the boat can pull the hardest. Of course, a scale factor will be employed so that the small boats will be able to compete with the big ones.

Are you really ready to go to sea in command? Can you sit in the captains chair on the bridge of a ship, giving rudder and engine orders, and pilot a vessel safely through dangerous and restricted waters, trusting your helmsman? The blind piloting trial will prove your mettle. You, as the skipper, will be required to hand over your controller to a blindfolded helmsman of your choice and navigate through a channel fraught with the perils of shoal water, sunken wrecks, rocks, and other vessels. The winner will get through unscathed. Choose your helmsman and start practicing now.

For the predicted log you will be able to run your boat as fast or as slow as you can. Your only task will be to run it through a course as close to the length of time you say it will take, before you start the run. Easy, huh?

Also in regards to the last month's show please see the following article from the May 2, 1980 San Diego Log.