The Slipway News

Le GROS VENTRE

Le Gros Ventre stern section; model and photo by Marc M.

- Construction of a planked on frame Model -

Volume 2 - Issue 1 - March 2005
The construction of the Models

Internet sites to keep up with the project:

Access to the documentation being gathered throughout the construction.
Main discussion Forum where questions are asked, problems are solved and where everything is kept:
http://forum.aceboard.net/index.php?login=15916

The construction in photos:

http://www.bonhrichard.com/grosventre.html
This is the main site for the project. From there you can get some information about the project, its goal as well
as follow the construction progress on all the models. All of the participating modelers who send their photos
have or will have a section dedicated to their model.

Also, as can be seen several members do have their own website showing their own construction log with some
explanations and lots of images.
Steve H. (in English)

Alain D. (in French)
http://perso.wanadoo.fr/alain.974/

The Magellano Group (in Italian)
http://www.magellano.org/grosventre/
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Front Cover: photos by Marc M.

Marc lives in northern Belgium and is simultaneously working on two models of Le Gros Ventre. A view of his stand alone stern section is shown here. The other model is a full version of the ship; both works are at 1:48 scale. Sectional representations are not very common but have the advantage of showing certain areas of the ship that are often difficult to see in a full model.
Dear participants,
Dear readers,

This issue of the Newsletter celebrates the first anniversary of the construction project of a series of models of the French gabare Le Gros Ventre. Last year at this time, some of the builders were still waiting for their monograph to arrive. Up to this date, we have seen good progress made by the original builders. As well a number of new members have joined in this effort and hopefully more will come on board to experience and participate in this endeavor.

Personally I can say that the construction is a little behind schedule from what I had anticipated, but I guess it is what model ship building is all about; patience in watching the model grow from just a few planks of wood. So far all the builders have elected to work on their ship as a planked on frame project, but I would like to remind everyone, and especially future builders who could find interest in this project, that this is not the only accepted method to build; this project is also open to people who would consider a planked on bulkhead model or any other technique. The important is to have fun and learn something new working on the ship whatever method is used.

During this second year, the newsletter will keep following the same format in regards to page numbering. We may not have an Issue out every 3 months, as the dates of publication are not written in stone but we will follow the chronological order of construction, step by step. In some cases the issues may be smaller but more frequent, and in the end it will mostly depend on the work at hand and especially; the work done. Here is what is planned for 2005 (not necessarily in this order):
- The permanent installation of all the frames as well as spacers.
- Sanding the inside of the hull, fabrication and installation of the keelson and the first deck-clamp.
- Sanding the outside of the hull.
- Installation of the wale and rails.
- Inner planking.
- Fabrication and installation of the stern knees, riders, mast-step, hooks.
- Stern framing.
- Fabrication of the deck beams, knees.
- Gun ports and a few fittings.
- The hold and storerooms as well as other internal elements, etc.....

At the same time, we will try to prepare for some of the metal work. Hopefully we will be able to achieve a few more steps as well. We will continue to present the progress of the builders willing to send their photos for posting on the forum and on the main site and, if at all possible, we will also have several articles dedicated to particular techniques used to make certain parts. Your contributions are always welcome.

As far as special issues, I am sure that we will be able to look at some special events about ship modeling which may take place during this year.

All in all, it looks like 2005 will be a good year. We should all be able to make good progress on our ships, and hopefully the sharing of information, the construction comments, the friendliness of the exchanges will keep flowing and why not increase on the forum. Once again the participation is not part of a contest, so keep the text and photo updates coming whatever you think of your work.

I will take this opportunity to thank all the participants in the forum and newsletter for their support. As well, I congratulate all the builders for a job well done.

Enjoy this first issue for 2005 ....

Gilles K.
Introduction

Time has now come to start the permanent installation of the parts made so far. By now, the following work has been done and covered in preceding chapters dedicated to the construction of the model:
The axial framing; this area was covered in the April 2004 newsletter.
The frames; we saw several methods used for their making in the April and July 2004 issues.
The lower stern; studied and built in the July and November 2004 issues.
The hawse timbers as described the November 2004 issue.

To these chapters, we should also add the construction of the building board; this very important part of the construction was covered in the April 2004 issue and at this point we should have the axial framing firmly secured in it. Now that we are ready to go through the installation of the other components, we will see that this building board has becoming an essential part of the construction; including the upper level. There may be an argument to be made in regards of this second level, but I must say that this feature of the board greatly facilitate fitting, squaring and maintaining all the parts in place during the steps to come.

Of course it is possible to do as good a job without it, but modelers of all levels would be encouraged to go through the extra work required to fit it in their plan for the construction of any ship model; after all it is a proven method for building model ships from the keel up. The following explanations will cover the installation using such a building board. None the less, we will also talk a little about the method used with a simplified construction base not including a second level or contour jig.

Installation

Photo 1 will remind everyone about the last parts covered in the November 2004 Newsletter. At this point we had studied the parts in the lower stern to form a separate assembly ready to be installed on the model. From what we have seen, this assembly would have been put together in the main building board or in a separate jig. Whatever the method used, at one point, this assembly must be transferred on the model. We also must note that the lower stern assembly is fitted with frame 63 and 64 (photo 1)....... So in a way, the frame installation has already begun. Assembling the parts needs to be done with care as they must be correctly put in place; the wing-transom which is now an important reference point should be installed perpendicular to the keel. This horizontal alignment can be checked by measuring the distance between the extremities of the wing-transom and a line perpendicular to the keel traced at the back of the building board. Then the vertical alignment must also be checked by measuring the height of the wing-transom, at each end, from the base of the building board. As well, frame 63, if already in place, can be used to square off the assembly on the keel as the frame should stand at right angle (90 degree) from the keel or the base of the board.

Frame 63 is then the first frame to be installed and it is essential that it is precisely in place as the installation of all the other frames will depend on it. We must also emphasize that some minor adjustments will be necessary during the installation and alignment of all the frames as deviations are most likely for most modelers.
"We must note that such alignment differences are normal. Aim for perfection to obtain the best work possible ......."

Photo 2 shows the method used to insure that the frames are fitted vertically. As the rising-wood is notched, the foot of each frame is firmly seated, even if the notches seem quite small. As a result, all adjustments will have to take place at the top of the frames. Note that a preliminary fitting must be done for every frame. Any adjustment should end up being minimal. The spacing at the top of the frames should be the same as the one at the bottom and the cross timber placed at the top (during the frame construction process) should be adjusted in consequence. Note that this cross timber has several functions; the spacing from frame to frame along the hull and the spacing between the top-timbers of a given frame.

The horizontal alignment is checked by measuring the distance from the frame to the line traced across the back of the building board. This operation ensures the symmetry of the hull from side to side.

This alignment is also achieved with all the lines traced across the upper level of the building board. These lines, which were traced during the construction of the building board show the location of each frame in the jig. In my case these lines correspond to the aft face of each frame. If these lines are truly perpendicular to the keel, the sides of the hull will be symmetrical.

All the frames are checked using the same method and, once again, both alignment, horizontal and vertical, are very important.

"Having decided to install the spacers located between the frames, we will look at this step right away, and come back to the installation of the frames a little later ....."

Before we go any further into the installation of the frames, we must look at, and maybe consider working on the inclusion of other parts. I have personally decided to work on installing the spacers at this stage of the construction. Some will say that this operation adds some degree of difficulty into the process, but by making a few preparations, it should not present too much of a problem. The important factor is to make sure that they are lined up from frame to frame.

As indicated on the monograph, the framing of Le Gros Ventre includes a number of spacers located between each frame. In total, we find 5 rows along the lower part of the hull. We must also note that these spacers are an integral part of the framing as they add a lot of solidity to the assembly. In a way, they are indispensable. The location of these 5 rows is as follow:
1) One centre row. These spacers are installed vertically between the rising-wood and the keelson (refer to photo 4).
2) A row of spacers is located atop the joint between the floor-timbers and the futtocks above on both sides of the hull (photo 5a).
3) This row is also installed on both sides of the hull. They are located atop the joint between the half floor-timber and the futtocks above (photo 5b).
Each spacer is worked to form a rounded channel to allow water drainage on the sides of the hull, between the outside planking and the frames; the channel is on the outside face of the spacer for the water to move from top to bottom. As far as the center row, the channel is located at the foot of the spacer and runs across; above the rising-wood.
Photo 6: Installing the spacers

Working simultaneously on several frames will allow to mark the location of the spacers on a on a series of frames. This will facilitate lining them up from frame to frame. I found that the best method was to work on a minimum of about five frames temporarily in place after having fitted the center spacers and adjusted the thickness of the top cross-timber to make sure that the vertical alignment was done before proceeding with the other four rows.

Note:
On photo 5a and 5b, my interpretation of the drawings is the following:
On my model, the location of the spacers follows the same alignment for all the frames. The result is that the spacing between the row reduces as they are installed toward the front and the back of the hull. The distance between the rows is greatest in the center area as the lower parts of the frames are longest. The channel cut in the upper spacers is not shown on these drawings, but we will talk about that in the following pages....

Photo 6 shows the process followed for the installation of the spacers on a frame. After having cut the spacers to the right thickness, the frame can be fitted to check the vertical alignment. We must remember that the alignment was already verified once by adjusting the thickness to the cross-timber at the top of the frame. As a result only minor adjustments should be needed during this last fitting.
Once satisfied with the fit, all that is left to do is to give the center spacer its final shape including the channel at its foot (photo 7, 8 and 9).

Photo 5a: The location of the spacers on the frames built with crotches. These frames are located in the forward and aft area of the hull. The center row is not shown, but we will note the placement of the spacer the closest to the keel. This spacer is lined up with the joint between the crotch and the futtock next to it. As far as the row located further up the frame (away from the keel), we see that it is place atop the joint between the different frame parts. The center line of the spacer corresponds to the joint lines of the frame parts. The line is seen on the two photos above. Note that the outside face of all the spacers is perpendicular to the edge of the frames.

Photo 5b: This photo shows the location of the spacers for the frames built with a floor-timber and half floor-timber. The spacers are located atop the joints as described in photo 5a.

(The three images above are taken from the monograph)
Working in this manner, the location of the other rows of spacers can be easily marked. The next step consists of removing the first frame of this group (photo 10), then install the four upper spacers, checking the vertical alignment of the frame and to glue it on the keel. At the same time, another frame is added to the group and the sequence is repeated; installation of the four spacers, checking of the frame alignment, shaping and gluing of the center spacer, then gluing of the frame onto the keel, etc.

Some modelers will choose not to proceed with the installation of the spacers at this time. Of course all of the frames can be put in place and glued first. In this case, the spacers will be fitted and glued in place after having removed the framed hull from the building board. The spacers can then be lined up following a batten placed along the outside of the hull as per their location of the four rows on the plan. This method makes the installation somewhat easier as the batten can be used as a guide. Here again, this is up to each modeler to choose the working order, but at least this will show that there are different alternatives.

“One thing is certain, and that is that it is preferable to work simultaneously between the forward and aft frame............ ”

As we have seen in the previous pages, the building board composed of two levels should make the installation of the frames somewhat easier as it allows working with good, constant reference points. The upper level facilitates holding the frames in place while easing the alignment of the parts during assembly. Though we must also note that depending on the height at which the upper level is place, some minor problems can occur, especially if the jig is cut in one piece. If the jig is placed above the widest breadth of the hull, for example following the deck line, the installation becomes a little difficult as the opening is too narrow for the frames to go thru.

As a result, it is important to proceed by temporarily fitting the frames in groups. Once they are fitted vertically, from group to group, it is important to make sure that the last few frame are not glued in place before all the remaining frames have been aligned. As this is done, the checked location of the frames is marked onto the upper level (jig) just in case they do not correspond with the initial lines traced during the construction of the building board. Then one half of the jig can be lifted to allow the frames to go thru. If the jig has been made in one piece, it is at this point that it should be cut longitudinally; in two.
The photos below show several models of Le Gros Ventre. The framing is firmly held in the building board.

Even though the second level of the building board brings a certain ease in the construction, some modelers choose not to use it and proceed with a much simpler building base equipped with only the two vertical supports to hold the model in place. Using such a board, the frames are made the same way, fitted with the top cross-timber on which the center is marked. Installing the frames is also done as described earlier, being careful to line them up both horizontally and vertically. This alignment is achieved using a string stretched across the top between the stem and the stern of the model. This string represents the longitudinal center of the ship (photo 16). This method works just as well but it necessitates more care from the builder as it is quite easy for the frames to deviate from the center reference (line). The alignment is done using squares and by measuring the distance between the frame’s top-timbers and the center of either the stem or the stern.

“Whatever the method used, frame alignment is paramount and must be checked quite often during the installation process ..... ”

Photo 16: The construction of the framing without the upper jig. By looking closely at the photo we see the line stretched between the stem and the stern. The center of all the frames is lined up with the line and as a result symmetry of the hull will be achieved.
As was indicated in the preceding pages, simultaneously working on the forward and aft frames is recommended; essentially the installation of the hawse timbers and first couple of frames. The hawse timbers should be put in place quite early in the process. Photo 17 shows the installation at an advanced stage. The alignment of frame 1 can be accomplished by measuring the distance separating it from the last installed frame, aft. Once this frame is in place, the hawse timbers are very easily installed as they had already been fitted during fabrication.

Preliminary sanding ........and other steps...........

After having installed all the frames and once the glue has had time to dry, the last spacers are put in place. Then the outside of the framing is lightly sanded to obtain the bevels on the frames. As well the filling pieces located under the lower transom are cut and placed. Then more sanding is done in preparation for the wales to be added (later). As far as sanding, this operation is done using a rotary tools fitted with small home made sanding disks. Final sanding will be done at a later stage with fine paper.

I am also adding photos showing the shape of the channels cut in the upper spacers (photos 19, 20 and 21). The channel is located on the outside face of the spacers to allow water to drain from the top to bottom of the hull between the planking and the frame.
The framing is complete and has been sanded lightly.... (photo Gilles K.)

**Conclusion:** This stage of the construction demanded cutting and assembling a very large number of parts but we are now able to appreciate the shape and the volume of the hull. This chapter will be presented in 2 parts and we will have the opportunity to look at the hull sanding in more detail (inside and out). As well we will cover the addition of several missing parts, such as the keelson, aft partial frames and the counter timbers.....
To be continued ...............
Where to get the Monograph in North America

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- The cover of the monograph -

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It was in December of 2004 that Gilles invited me to join this forum. I was aware of the Le Gros Ventre Monograph as it was on the table of Pier Books at the Nautical Research Guild Conference in Portland Maine in September of 2004. I too was a vendor at this conference selling my book on carving sculptures for models and Bob Friedman and I chatted about the monograph at length. This is a great opportunity for me to participate in the forum, as I have planned to build a plank-on-frame Model of a yet to be determined ship and the experience of seeing the members of this forum build such a ship will be invaluable. Reading the Slipways News to date has already opened my eyes to this form of construction. We all can thank Gilles for his tireless dedication to producing an excellent newsletter as well as running and translating the forum for us all to enjoy. My hat goes off to you Gilles.

I had better tell you a bit about myself and how I came to be in this hobby. I am 60 years old and nearing retirement. In order to stay active in that new role, I intend to use my time for modeling and participating in the many venues afforded to expand my horizons on ship modeling. My very first model was built in 1982, a plastic model of Cutty Sark. The model ended up behind the television with the TV then falling on top of it as my young daughter and her friend watched in glee. At that point, I ended my modeling career until a trip to the Baltic in 1997 landed me in Stockholm on a bus tour of the city. We ended up at the Vasa Museum, and I was hooked again. Returning to Canada, I was determined to model the Vasa in wood. After a trip to the hobby shop, the owner convinced me that this was a far too difficult model and I ended up building Artesania Latina’s San Francisco, a factitious galleon. I completed the model in the fall of 1998. Soon after that, I decided to take an opportunity to buy a Sovereign of The Seas kit by Mantua that was being offered for private sale by an aging modeler. After conducting some research on the Sovereign, I soon discovered that the kit was not true to contemporary paintings and sketches as far as the ornamentation and other attributes were concerned, so after building the hull, I began a search for help to learn how to carve. It soon became apparent that there was none available and took it upon myself to learn to carve. Using small miniature chisels, I turned out some horrid little carvings. My dentist suggested that I try a dental drill and he loaned me his belt driven model that was used in dental school in the 1970’s. This proved to be the answer for me and I began carving boxwood sculptures for the stern of the Sovereign. Developing my own techniques, it became known to my modeling contemporaries that I could produce reasonable carvings and I was urged to document my methods in a book which was produced in 2002. I have shipped copies of this book to over a dozen countries in the world and the French version is about to appear in early 2005.

As a member of this forum, I offer to anyone who asks, carving information and solutions as required. All you need do is ask and I will try and help you. I continue to drink in knowledge from the many fine modelers around the world who appear in forums and web sites on the internet and look forward to many enjoyable years of ship modeling. It is indeed, my pleasure to be a member of this forum and amongst such talented contemporaries.
- A few more views of Bill’s Sovereign -
Rotary Power Carving Techniques
By Bill Short
Carving Ornamentation for Ship Models

The layout of the booklet is as follows:

Table of Contents
Introduction
Chapter 1 The tools available to rotary carve
Chapter 2 Wood selection for carving ornamentation
Chapter 3 Visualization
Chapter 4 How to rotary carve
Chapter 5 Carving complex shapes
Chapter 6 Finishing the carving
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It is a spiral bound booklet with an acetate cover, stiff board back, full colour cover page and the rest of the 52 pages are printed in black and white with high quality photos on 70# Hammermill paper. It will lay flat on your bench and can be folded over on itself to a one page size.

The booklet, which covers in detail, carving with rotary tools and dental burrs, is available for immediate shipment. It is 52 pages and has over 50 high definition digital photographs detailing the step-by-step carving lessons in both bas-relief and carving-in-the-round.

Additionally, I have added a bibliography of very good reference books on ornamentation and covered the methods of carving several of the complex carvings found on my model of The Sovereign of The Seas.

The selling price of the booklet including air mail postage and handling is:

Destinations in the USA and Canada $25.00 US Funds
Destinations in the UK and overseas: $30.00 US Funds

Payment must be in the form of a US Money Order or International money order in US dollars. As I am not a business, my bank cannot handle personal checks in other currencies, or other forms of payment. As you already know, it is not advisable to send cash in the mail for obvious reasons.

Mail your payment at your earliest convenience to:

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Thank you. ---
Le Gros Ventre: Deck framing ... looking forward.
(photo Marcel C.)