Construction manual

Storskär (1908)

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It is recommended to read the construction manual completely before starting to build the model. If the model is to be painted with airbrush, painting may be required before seperate parts have to be assembled.

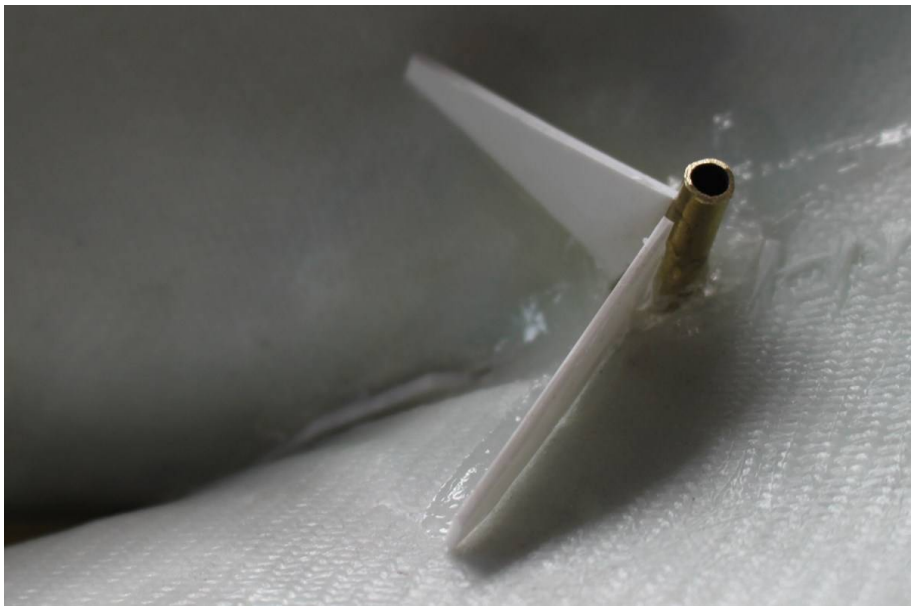
The hull is allready cut at the top of the bulwark, but it might be necessary to fill some putty where the side walls with the windows are to be mounted. In any case, the bulwark must be smoothed inside at the foredeck. The hull is laminated with 3 layers of 163g glass fiber.

At the end of the construction manual there are recommendations for shaft system and propellers as well as a list of colours.

Polystyrene is best glued with Revell polystyrene adhesive (the one with the metal cannula). You can even use this adhesive with the wood veneer strips (glue attachted to the deck, as the wooden strips absorb the glue to quickly).

Drill a 6mm diameter hole for the stern tube. Then a 2mm wide slot is cut into the hull with a cutting disc to assemble the hoe. You have to cut the hoe at the point where the sterntube will be mounted, but this can be done only after glueing it to the hull. To stabilize the hoe use the 2x3mm brass U-profile as shown. The brass profile is a bit longer so cut some slots in the hull to get a good connection of hull and hoe. The stem is made of a 1x3mm polystyrene profile that is glued to the hull from bow to helm.

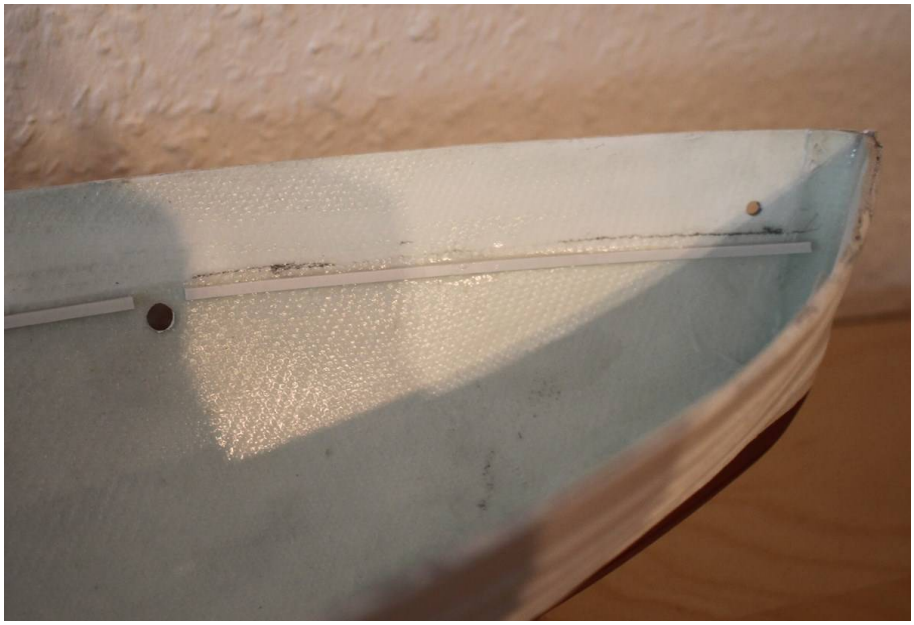
The rudder trunk (4mm brass pipe) is 27mm long and will be ground away after gluing to the hull as shown in the photo (use cutting disc). The front edge of the rudder trunk will be preserved and at the bottom remains a 3mm high ring.



To support the rudder trunk glue 2 trapezoidal Polysytrol (PS) milled parts to the trunk (V-shaped opened to the bow).

The rudder axle has a length of 80mm and is made of 3mm brass pipe. The narrow rudder blade is glued in front of the rudder axis, the broader behind the rudder axis and then filled with putty and sanded.
The rudder axis is secured to the helm with a 2mm brass rod (you have to drill a hole into the hoe (the rudder will not be removable later).

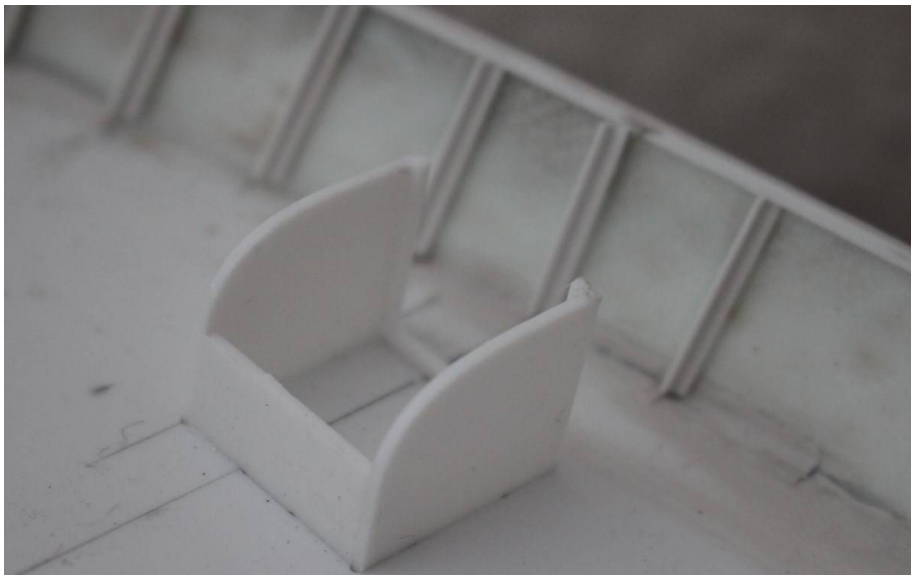
It is advised to paint the hull now, because after the installation of the foredeck it will be very difficult to glue the bulls-eyes. Bulls-eye glasses are milled in 1mm and if you carefully separate them from the plate, a narrow edge of about 0.2mm thickness is left to glue the glasses waterproof to the hull.



The main deck consists of two parts and it is advisable to initially install only the front part. For this, however, deck support strips of 2x2mm polystyrene are glued into the hull, 20mm below the top of the laminated hull. The marking can be made well with a pencil. The deck is milled from 1.5mm polystyrene and so 18mm will be left from the deck to the top of the bulwark. When gluing in, make sure that there is enough space at the portholes for the installation of the bull's-eye glasses.

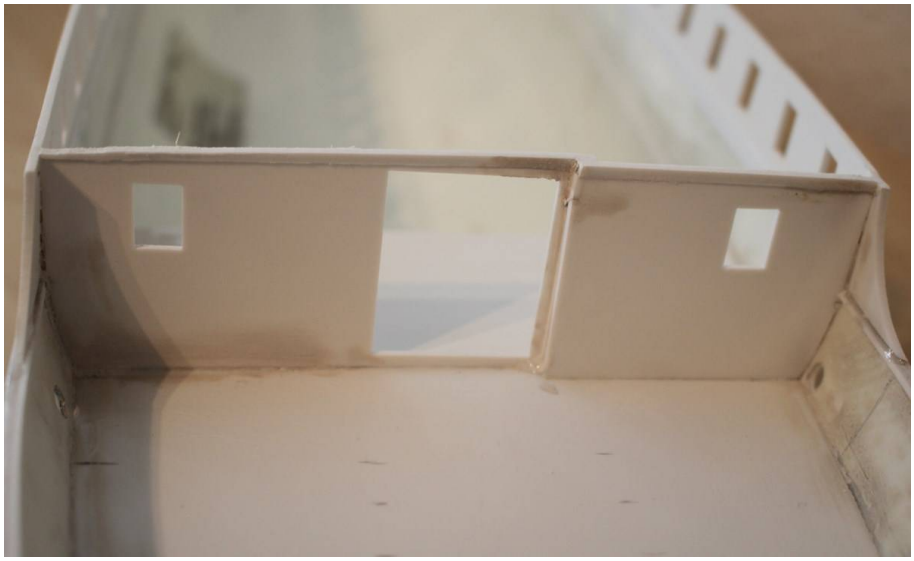
There is a large companionway on the foredeck – the position is clearly marked by the slots in the deck, where you have to install the walls. All parts are made of 1mm polystyrene.

The front hatch is a small box with a frame construction around it that carries a wooden structure. Since the laying of the wooden strips is a bit difficult when the hatch and frame are glued to the deck, I would recommend to wait until the assembly of the wooden strips.

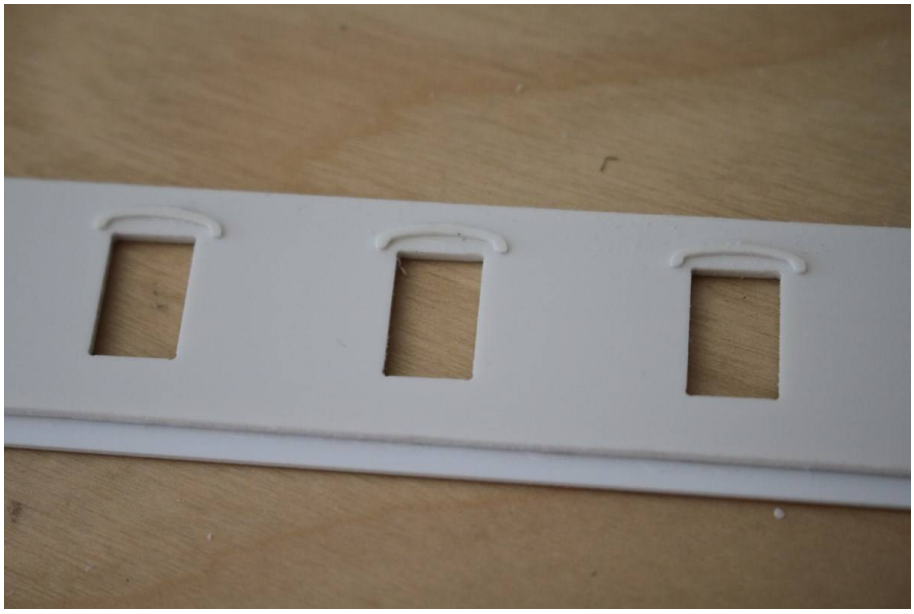


At the bow the higher bulwarks have to be mounted. Please keep in mind that the half round profile should be clearly seen after you mounted the extra parts.
Perhaps it is easier to mount the small deck first. A vertical spill (brass fitting) has to be mounted and on the sides bollards and lips. To find the exact position use drawings.

The bulwark supports are made of 2x2mm L-polystyrene profile. Distance between supports about 10mm.

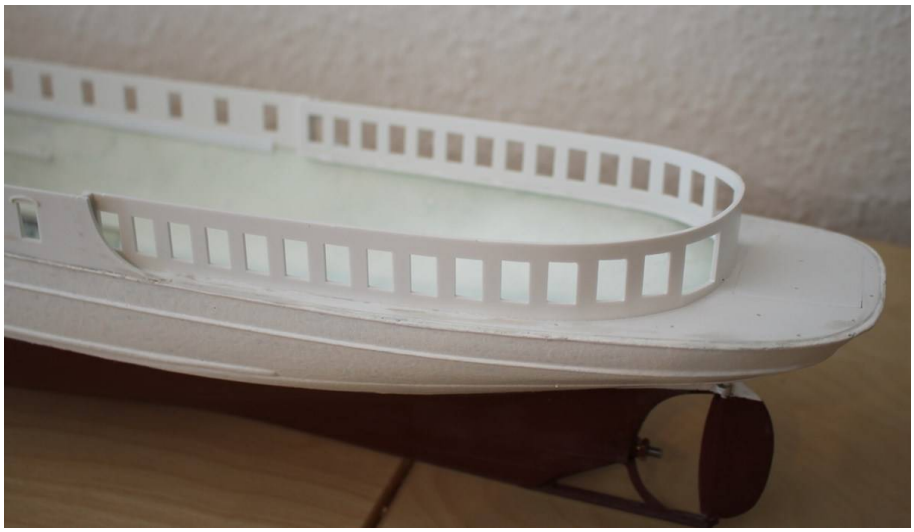


The foredeck is a little bit round shaped and the front wall of the superstructure will give some shape to it.

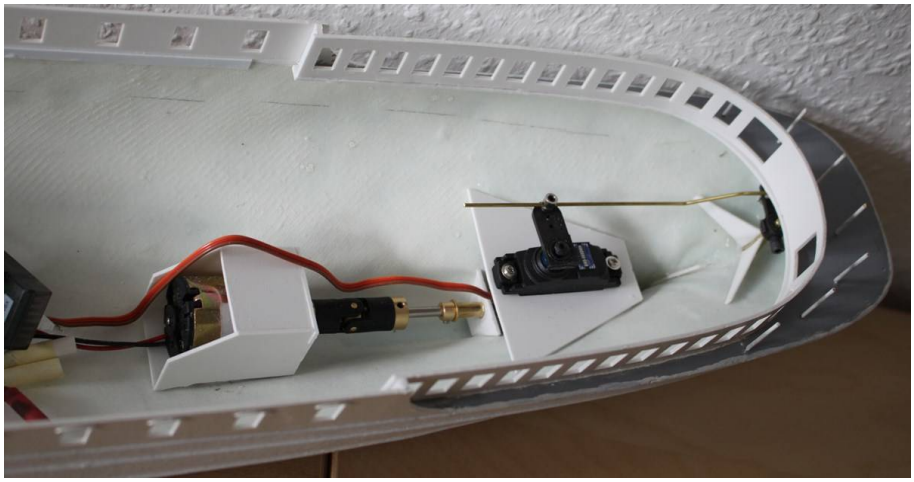


The side walls midship with the many windows are glued to some strip of 1mm polystyrene which will be used to allow to glue them tight to the hull.
The rain deflectors (0,5mm polystyrene) have to be mounted above the windows.

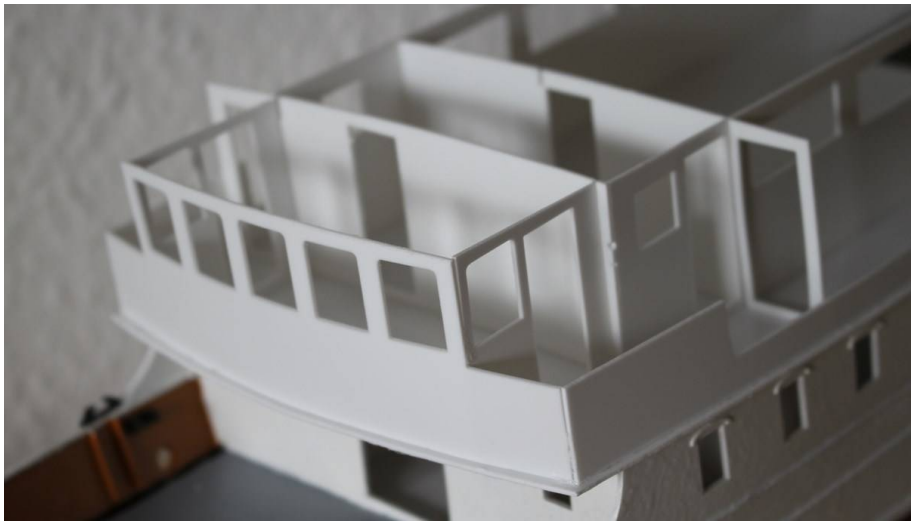
Next part is the narrow deck at the stern. Please note that due to production the corners at the opening above the rudder are not quite rectangular. You have to grind them – otherwise the cover will not fit into the opening. Do not miss to glue the frame under the opening before you glue it to the hull!



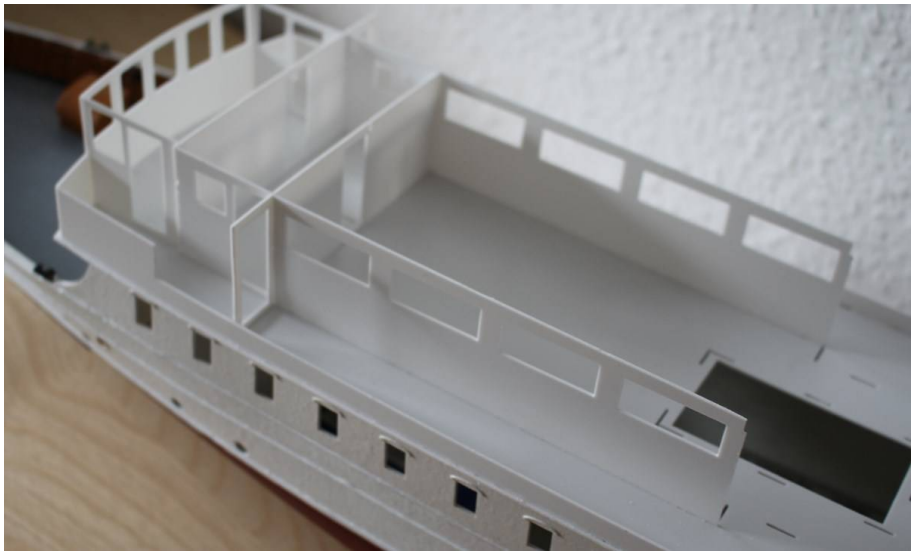
Now the wall of the aft lounge is mounted to the deck. The distance between midship sidewalls and this aft lounge wall (approx. 2-3 mm) is filled with some polystyrene.



In case you decide to build a radio controlled model you should install motor and rudder servo now. Rudder servo should be placed deep in the hull (otherwise you will see it through the windows). I would suggest to mount it directly on the shaft support.

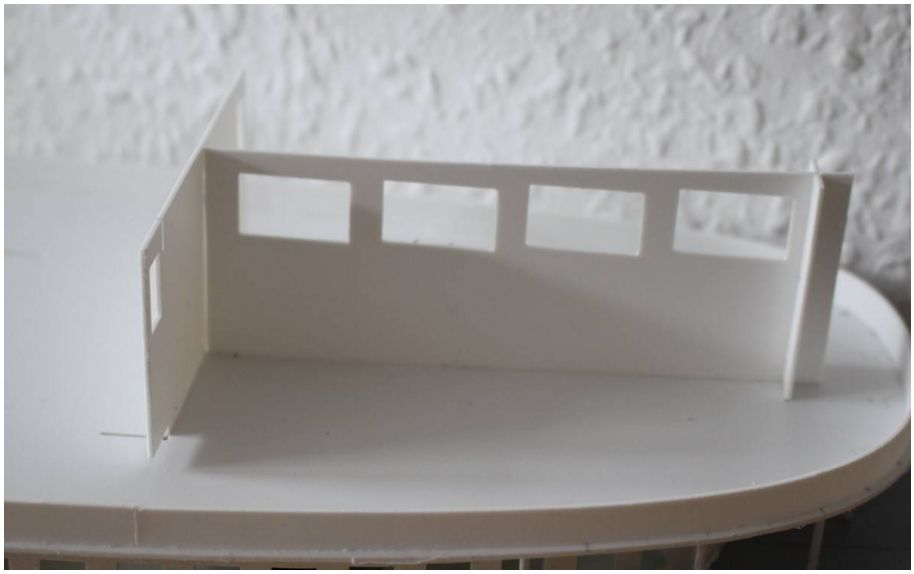


Bridge deck is made of 1mm polystyrene. There are slots for the walls and others for mounting a support under the deck. This will give some support against lateral slip and will prevent light shining through if you intend to lighten the model inside.

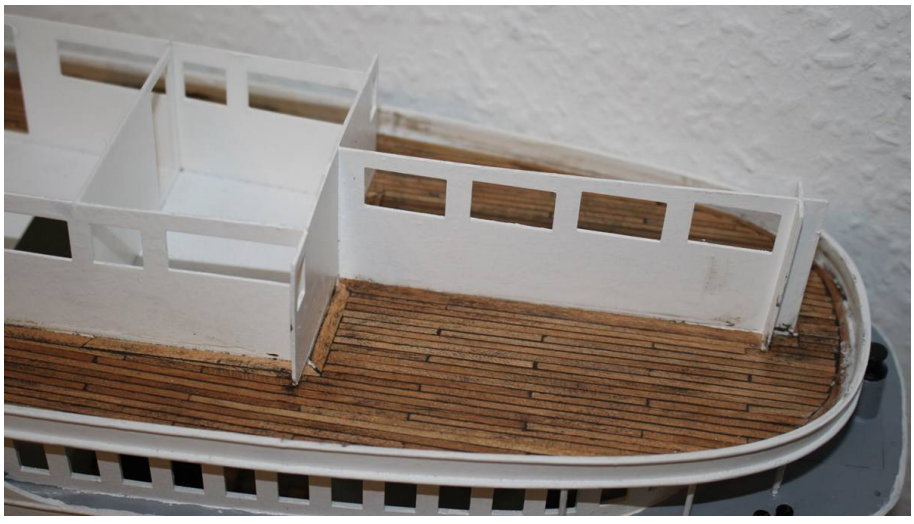


Start with the lateral parts (high at the bridge and lower to the stern) and use the slots at the rim of the deck (inner slots will be used for the deck support). The part at the rear of the ship is a little bit longer than necessary in order to give some space for corrections.

Then bridge front and the side walls of the restaurant, entrance area and aft lounge are glued to the deck. The wall in the middle and the traverse support is glued. If its done continue with the inner walls of this deck starting from the rear.



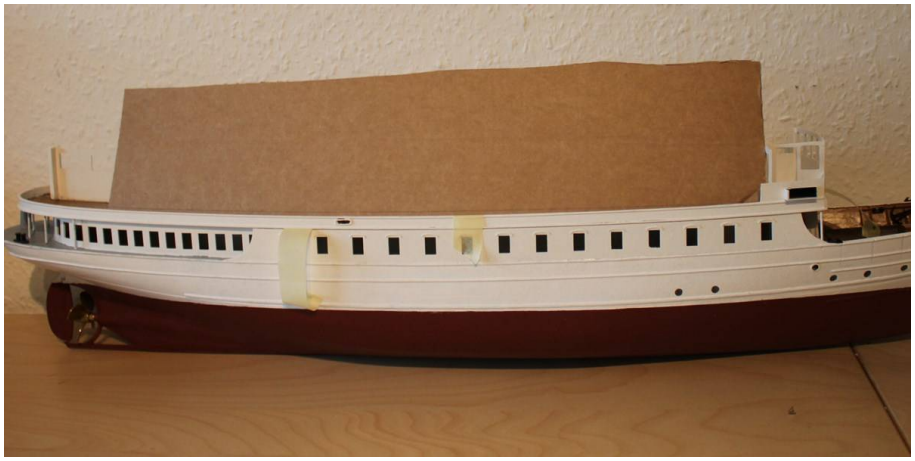
Having finished all walls you can glue the supports at the backside of the deck. Slots are different on each side – so cannot mix them up. Please note, that you have to cut off some parts of this support later, where cabin walls on main deck are connected with the outside walls.

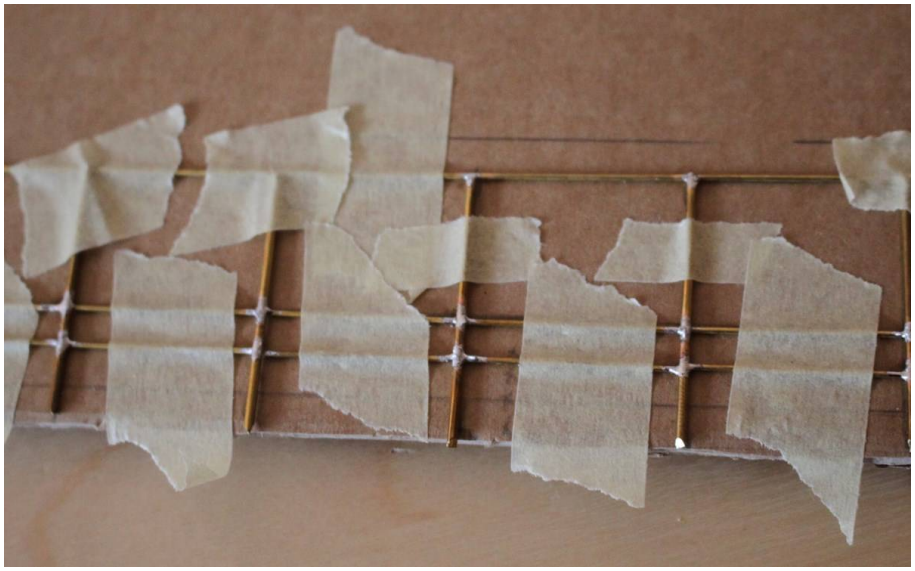


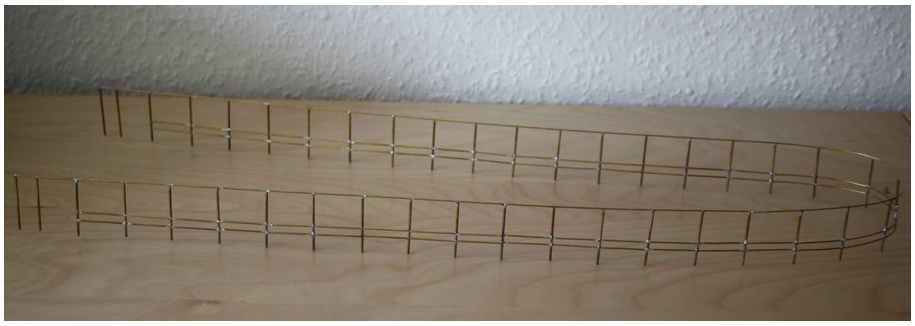
Now you can start laying the deck planks. Leave 3mm distance to decks edge for the gutter. Use 4mm cherry (they are marked “Kirsch”) strips around the superstructure and to the gutter. Then start laying planks as follows: draw lines with a pencil onto the deck, parallel to ships axis as guide lines. I would suggest planks with a length of 100mm maximum – make every 25mm (quarter the length of the planks) a line crosswise as marking where planks meet. Start in the middle and shift the plank a quarter to front or aft every time you start a new row. (you can use polystyrene glue for this, but you have to attach it to the deck first as the veneer strips will soak it to fast). Leave

some space between the planks (under 0,2mm) for caulking. When planking is finished get some clear paint onto it to protect the pores of the wood. Fill all spaces with black or dark brown wood filler (waterbased). After drying remove surplus wood filler with cutter blade. (you can try other means to plank the deck, but it is quite simple and effective).

Attach a 1x1 profile to the outside top of the bulwark. This runs up to the front at the captains bridge. Navigation lights are mounted just on top of this profile.

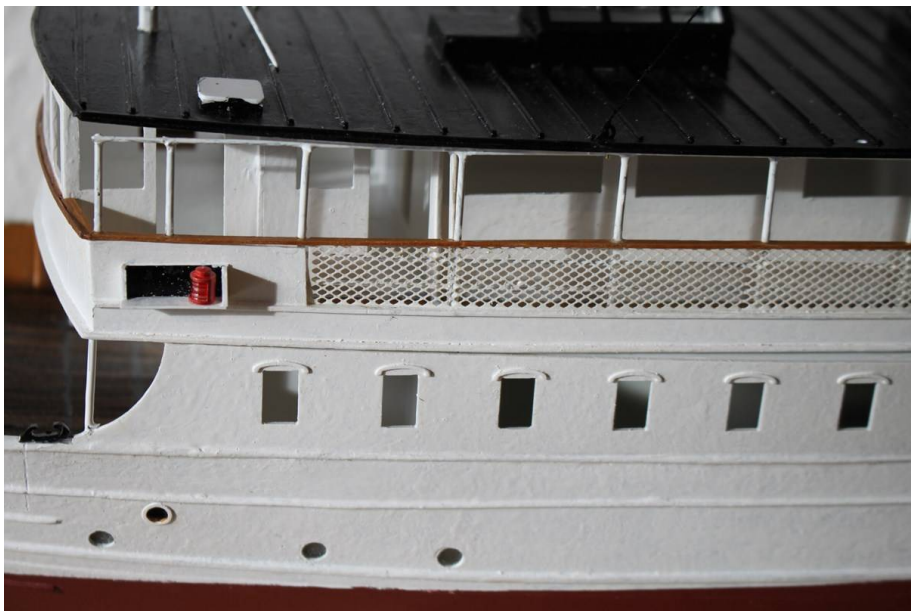






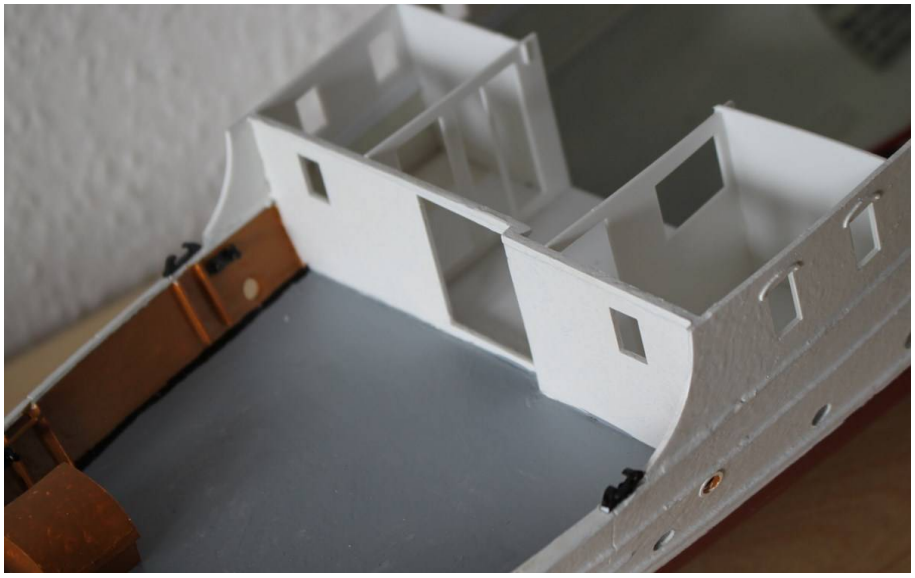
Next step is the construction of the railing and the roof supports. I suggest to take a piece of cardboard as construction device. The cardboard is held against the bulwark from inside and the top of the bulwark is marked by pencil. Now you have got an ideal form of the curved form of the deck. Cut off the part of the cardboard beyond the line, mark three parallel lines to this curved line (top line for the roof support and two for the horizontal struts between the stanchions). Use drawing and make perpendicular lines where you have stanchions. Stanchions are made of 1,5mm brass, horizontal parts are made of 1mm brass. Attach them to the cardboard for soldering.

The railing covering is attached in separate parts. Please note that they have to be cut at the sides (to allow the diamond formed net a continuation)

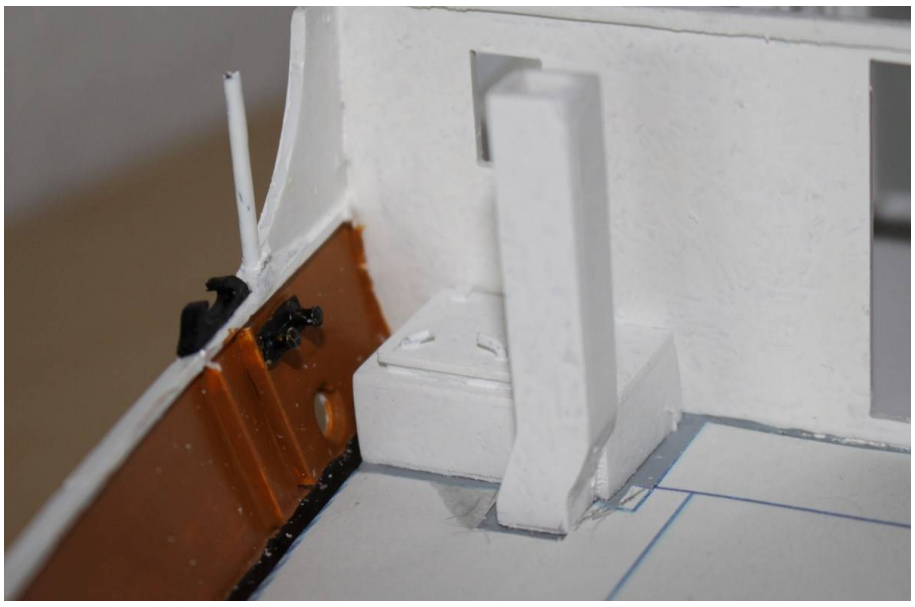


and the top (this will be covered by the handrail). Glue it from outside to the stanchions and the top of the bulwark.

Handrail is made of 1x2mm teak strip.

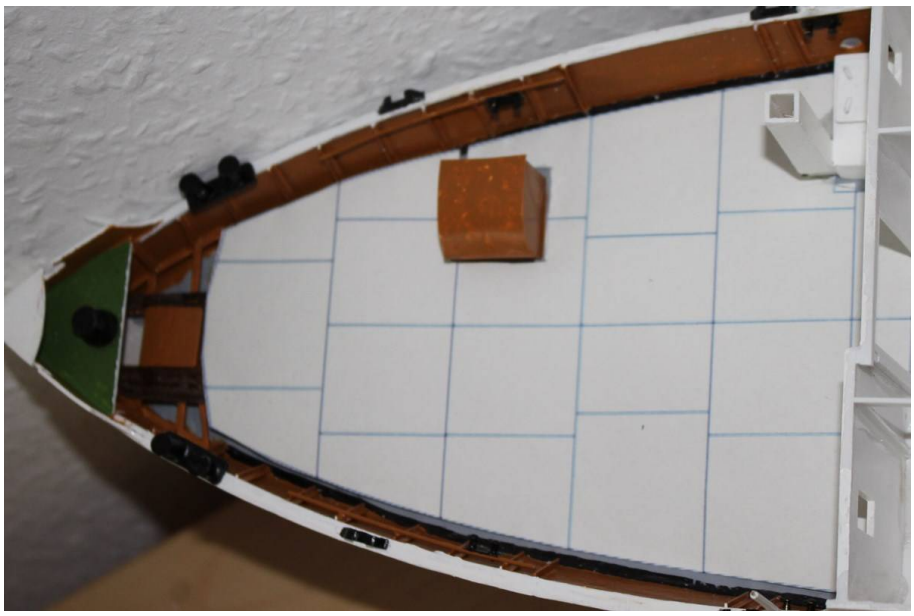


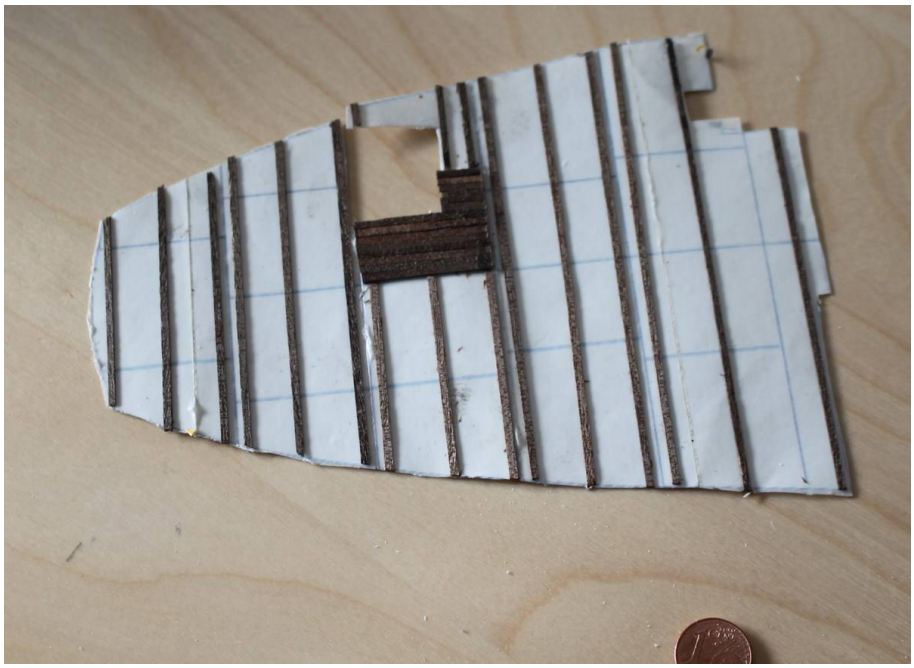
The foredeck is completed with some small details: bollards, anchor and the colouring (bulwark: ochre – gutter, bollards, anchor: black – deck: light grey.
You will not see much of the grey paint later as deck will be covered mostly with dark brown wood.

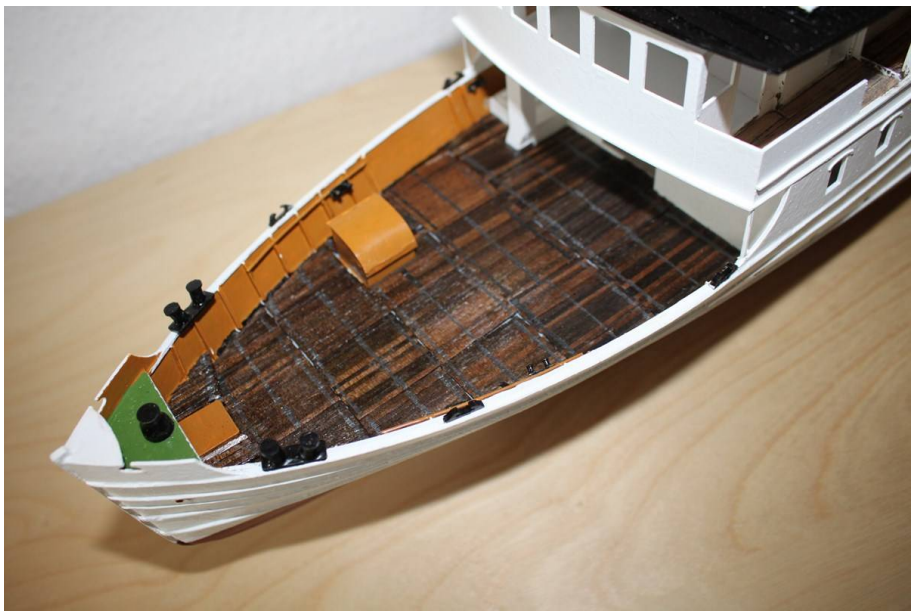


Glue the parts of the small hatch and the fan and fix them on the deck. Take good care to leave some space to the bulwark!

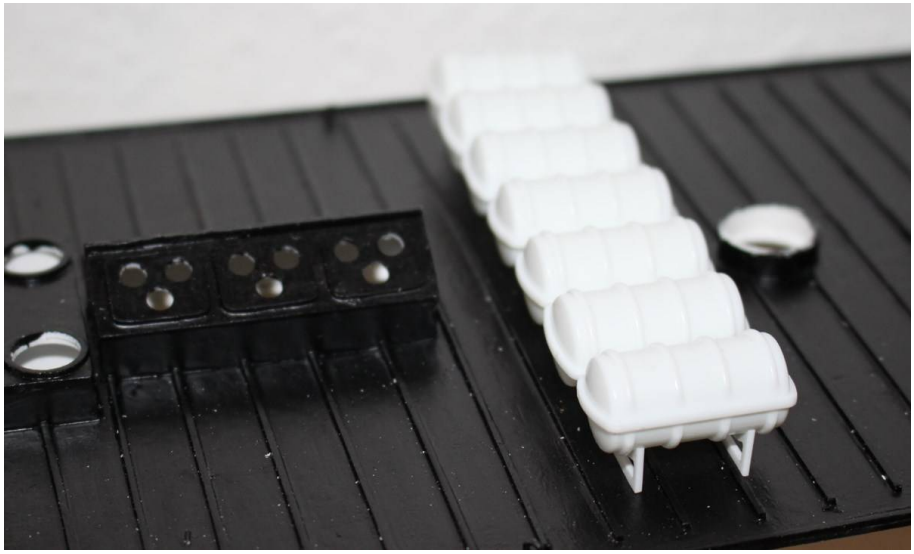
The foredeck is covered with separate wooden plates which are made of dark brown planks fixed together with metal strings.







You find are copy of the plan for these plates in this kit. I fixed double sided duct tape to it to fix the crosswise dark brown wood strips (smoked oak) that are used to have some distance to the deck and as support for the upper strips running parallel with ships axis. I would suggest to glue on plate after the other and a bit oversized to get the puzzle set on the deck without any distance between the parts. The steel strings were painted with Tamiya colour gun metal.

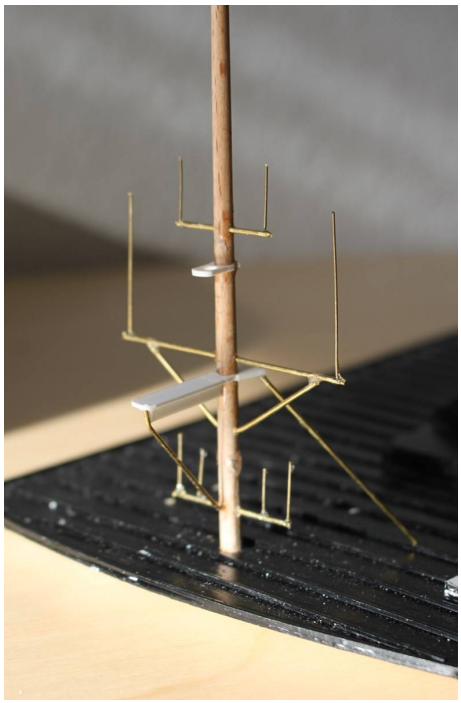


Now you continue with the construction of the roof top. This is planned to be removable in order to continue with detailing the inside of restaurant and lounge.

There is a shelf directly above the windows on bridgedeck to store life jackets. So it was a good idea to use this for a roof support and to give it the right curved form. These supports are glued to the roof from beyond (the shelf can be added later).

Glue a 1x1mm polystyrene strip at the outline of the roof and every 10mm crosswise (this directs the rain to the outflow).
Glue the parts of the skylights over restaurant and the round skylights over the staircase and aft lounge to the roof. The funnel is placed on a base together with four vents. The smaller vents have to be glued together – the larger ones can be glued directly to the base.

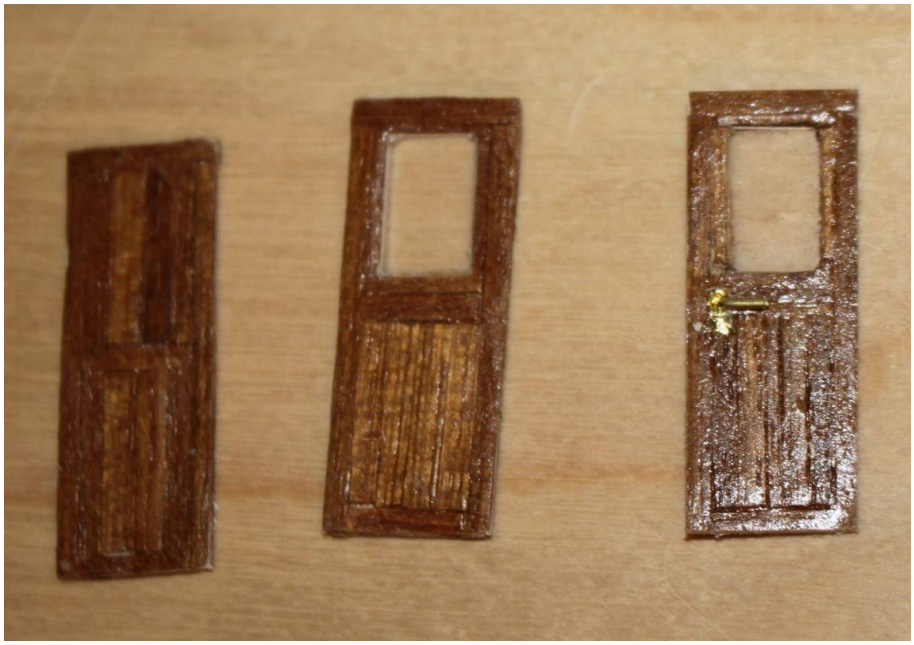
The funnel is constructed out of several polystyrene parts, a acrylic tube and some brass details. First of all you have to attach two bands of 0,5x2mm polystyrene around the funnel – 30 and 60mm under the top end of it. The exhaust pipe in front of the funnel is made of 3mm brass pipe (125mm long) – the steam whistle is made of 2mm brass pipe (100mm lang). They are fixed to the funnel with rings made of 0,5 brass wire. The top of the funnel is made of 3 layers polystyrene – the first one with the grid is the largest and is the first to be mounted followed by the ones smaller in diameter. Use putty and grind it to a flat surface.



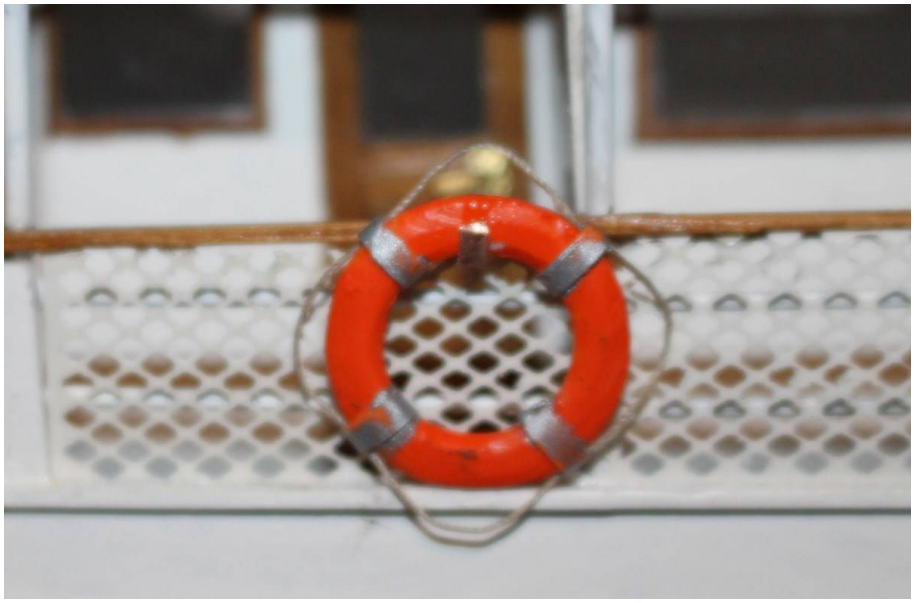
Apply hatches to bridgedeck and the storage for the liferafts.

The mast (beech) is allready grinded conical (4 to 2mm at the top). Attach crossbeam (1mm brass wire) and antenna (0,5mm brass) and the beam for the radar according to picture /drawing. Radar has to be made of polystyrene profiles.

The windows were milled in 1mm acrylic glas. The space between the windows is about 0,2-0,3mm thick and is meant to be used as mounting device. You can cut the material either with cutter or sharp knife and you should try to keep a very narrow frame of this round the clear glas. When you attach the glass from inside, it will help you to glue it to the wall.
The frames for the windows on bridgedeck are made of 0,4mm plywood. They are already stained in teak colour. Be careful when you cut them out of the plywood!
The windows in the short wind shields at the side of the aft lounge have frames made of polystyrene!



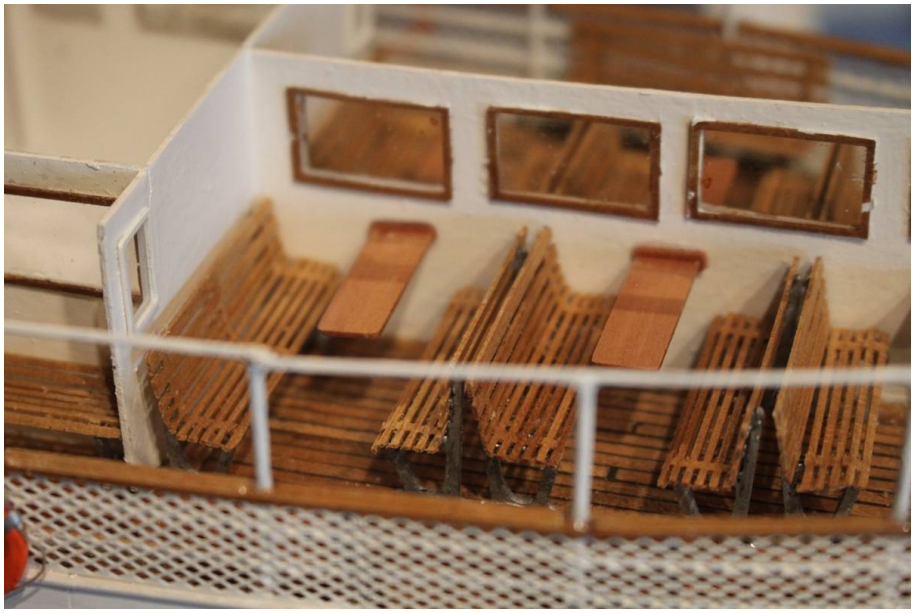
To construct the doors you have to glue teak veneer strips to the polystyrene doors (0,3mm). See the picture how they are made. After grinding and colouring add a door knob made of brass wire.



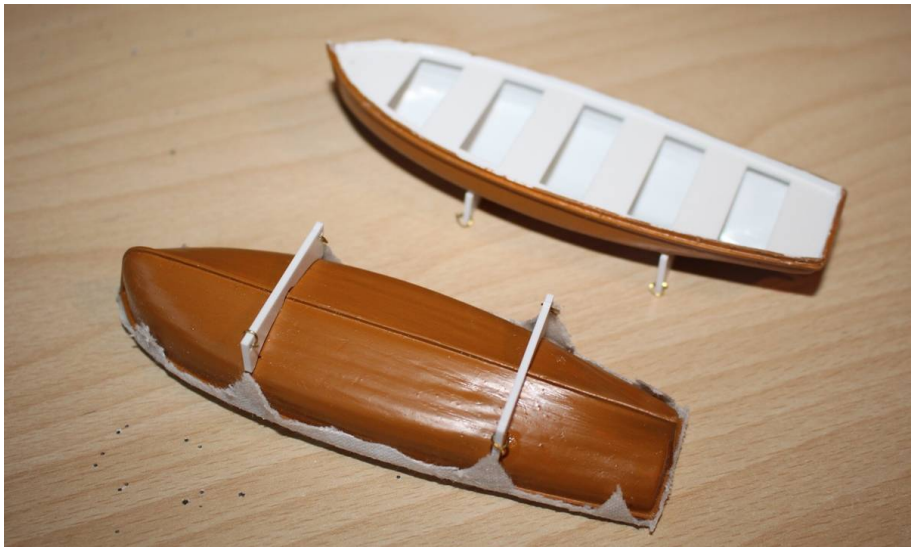
There are 7 rings for the lifebelts. After painting them with orange colour, add a rope by fixing it with short segments of duct tape. For the holders I recommed thin brass or copper strips which are fixed on top of the handrail.

Something very special to swedisch archipelago steamers are the tree trunks that are used as protections outboard when the ships call at the ports.
I recommend to use thin branches of birch or aspen.

There are a number of benches on bridge deck on both sides of the ship. The wooden parts for seats and backrest are milled in cherry veneer. It is recommended to paint the parts with clear varnish first to make it a bit more solid. Attaching this wooden parts to the polystyrene supports is much easier, when to

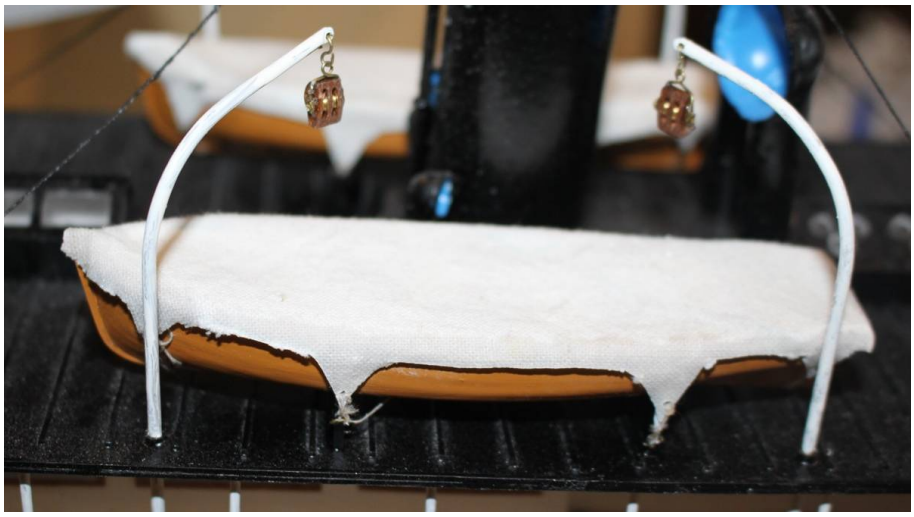


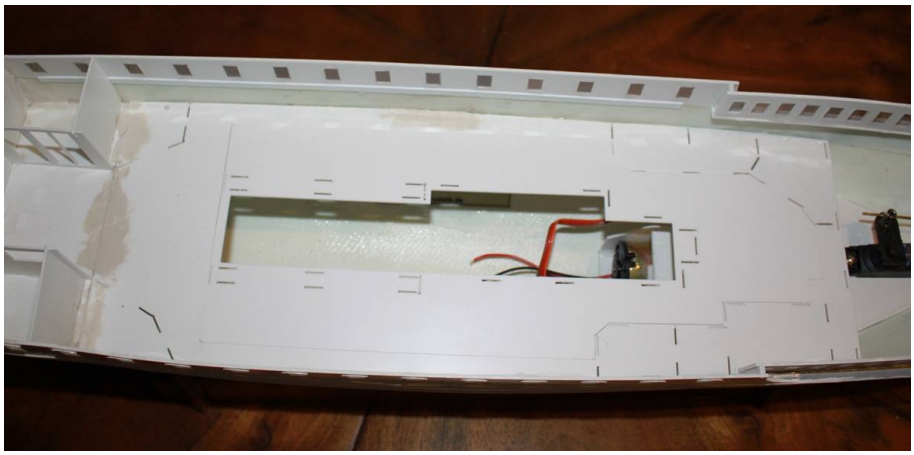
first fix the wood onto masking tape, then break the narrow connections between the wood strips where seat and back rest meets. Glue to supports using superglue.



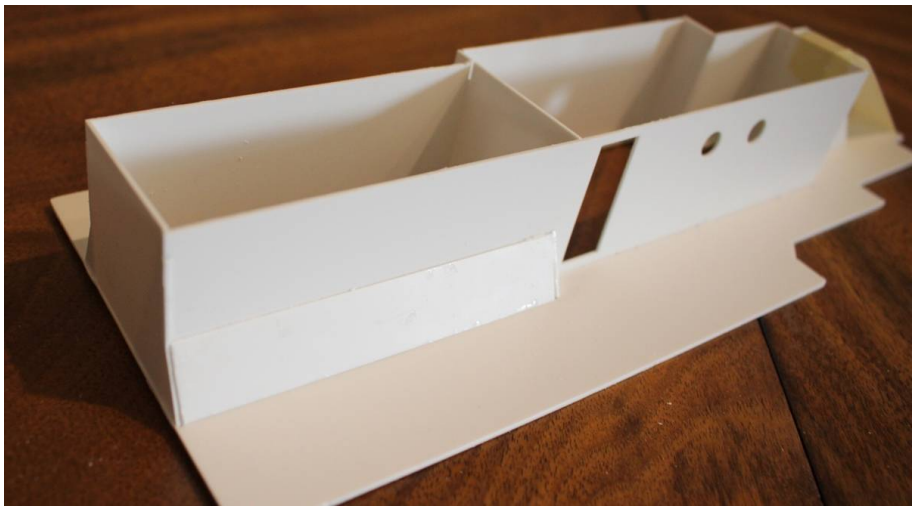
On top of the roof is the place for the two lifeboats.
Attach 1x1 polystyrene as stem onto the lifeboats. Add the seats as reinforcement although the boats are normally covered with a tarpaulin.
The hold for the boats have small holes at the sides to fix the tarpaulin to the lifeboat and the roof top.

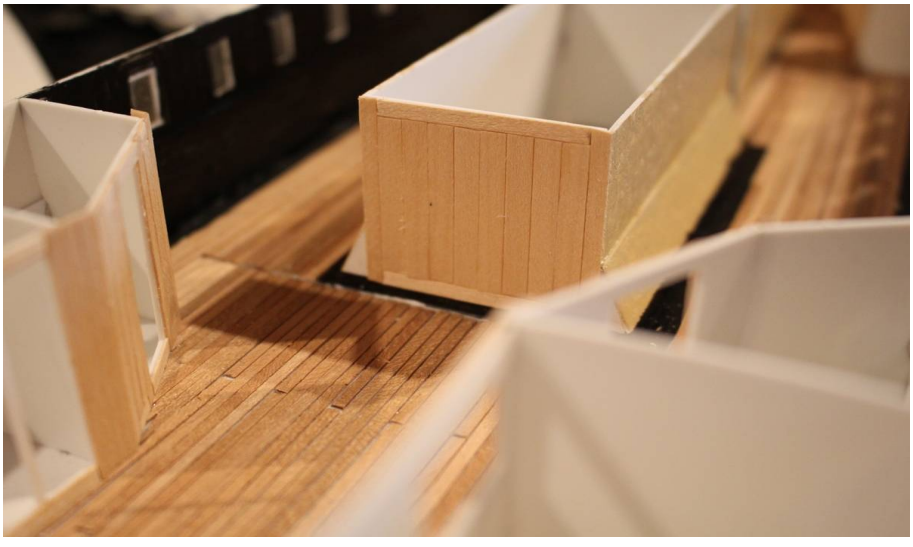
The blocks shown on the photo are part of the fittings. The Axis has to be made out of 1mm brass wire. Take some 0,5mm wire for the suspensions. The S-shaped part is used for the suspension to the davit.





You can even add the interior on main deck as the polystyrene parts are included. Only the interior of the aft lounge on main deck will not be possible as space is limited due to rudder servo (does not apply when you build the model for static display). Some photos to give an idea of more details inside the model:





Colouring
I recommend Revell Enamel satin finish:
Underwater: hull red frosted 137 (RAL 3009)
Hull, superstructure, mast: white satin 301 (RAL 9010)
Bulwark inside: ocher satin 382
Walls maindeck inside: beige satin 314
Funnel ring: sky blue (RAL 5015) – yellow satin 310
Roof, bollards, winches: black satin 302 (RAL 9005)
Foredeck: pale grey satin 374

Prop shaft / propeller / motor:
I recommend a standard prop shaft with 4mm axis and 6mm diameter – the prop should be a 4-blade-40mm-M4 (Raboesch 147-14). I recommend small Bühler motor as 498 BB S (12 V, 3100 U/min) – perfect speed at low power consumption.