Resin Parts for HMS Victory Heller 1:100

Working Principles

Resin Parts

[Tips & Tricks for Model Makers]

Tools needed:
Electronic side cutters without bevel, sharp scalpels, small files in various shapes, sanding blocks, sandpaper, super glue fast and slow.

Store resin protected from light and free from tension.

Resin becomes brittle under UV light. This makes it easier to break during assembly. Therefore, store the unassembled parts away from light. After assembly the parts are are protected by the paint.

If the storage is not even, the parts may deform, especially if it has become hot. See notes on deformation with heat next page.

Remove sanding dust and grease

The parts still have white sanding dust on them, this is from removing the print supports. Unless otherwise stated, I already removed the supports, as this is easier to do before curing. This also reduces the risk of breaking the parts for the model maker :-)

In the case of cast resin (white), the grease layer must also be removed, as the mould is treated with paraffin.

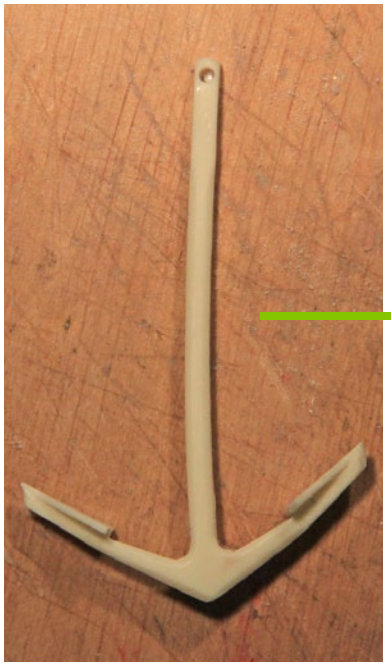
Bringing Resin Parts back into Shape

Is there a resin part bent out of shape?
Never try to bend it back by force when it is cold!

Better: Wait and drink tea, preferably Earl Grey, hot (*)....

Put the part into the hot liquid, and when it is warm enough, reshape it as desired and fix it in the new position when it cools down.

This also applies to printed parts, in the picture below one can almost tie a knot in it wihout braking.



PS (*): Normal hot water will also do, but has less style ...

Cutting and separating

Resin parts are very brittle. You should therefore always take the utmost care when cutting them.

Where possible, I remove the supports before curing, but many parts need to remain attached for identification purposes or to protect them during transport.

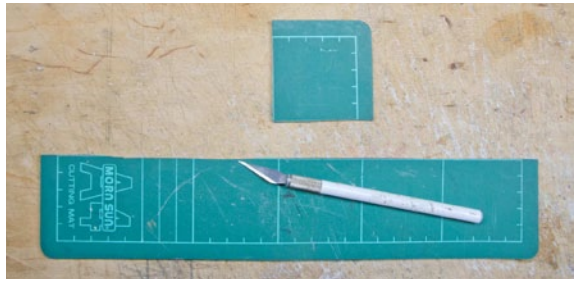
When removing them, a resin saw is always the best option, as it does not build up tension in the material.

Only use fresh, sharp scalpel and cutter blades.

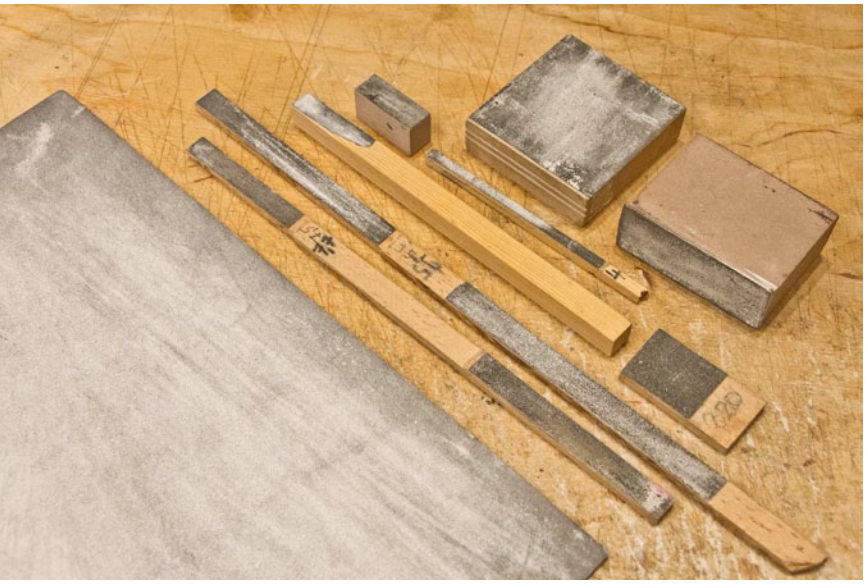
The good old fretsaw also often comes in handy, including for cutting out holes in the centre.

If using side cutters, never use combination pliers; instead, use only sharp side cutters from an electrical supplies shop that have no bevel, i.e. are for flush cut. When buying them, always check whether they can cut hair.

Another tip: old cutting mats can be cut down to size to save space. This also allows old, warped mats to be reused.



Sanding and Filing

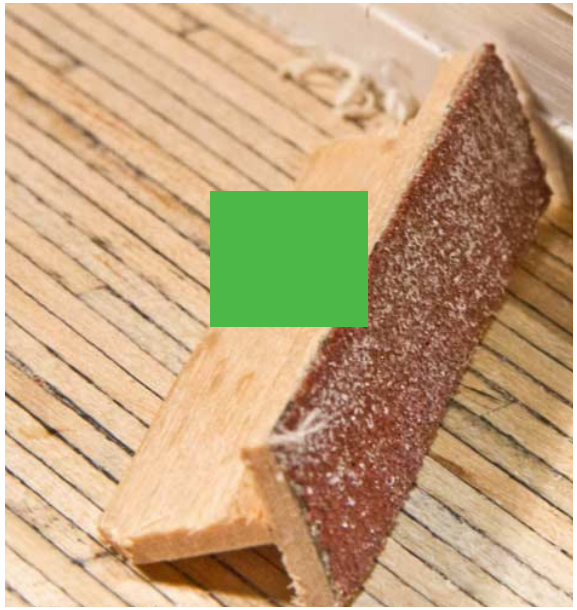


You can never have too many sanding tools.

The simplest method, of course, is to lay a sheet of sandpaper on the table: make sure the surface underneath is nice and clean first, then run the object you're sanding along it in looo-ong strokes.

Depending on the requirements, I also make special sanding sticks that are tailored precisely to the intended use.

For gun ports, I make small planks that are each precisely made to measure for both horizontal and vertical use; these have sandpaper only on the ship´s side to be sanded, whilst on the opposite side they protrude from the hull and are 2 mm narrower there. This way, the other side serves as a guide and support, allowing for more precise work.



Here is a small sanding block cut to size, using very coarse sandpaper to create texture on the surface for ink.

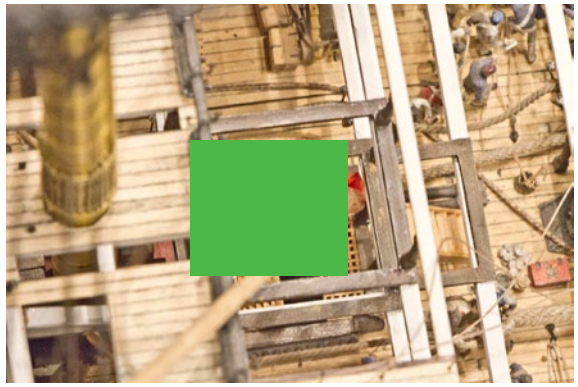
When working with black resin, I also use small sanding blocks to sand away the colour and bring out textures such as barrel hoops.

Tips und Tricks 1

Like a goldsmith, I've attached a light-coloured cloth under my worktop so that it drapes over my knees whilst I'm working. That way, small parts can't fall through my legs onto the floor. It's saved me a lot of time searching for them.

To stop small parts from falling inside the model, I like to cover any openings with cotton pads.

When rigging, I use a soft handkerchief to protect the area underneath from falling debris.



I attach other parts to a colored string to prevent them from getting lost.

If something does happen to fall inside the model, a kebab skewer with double sided tape on the tip usually does the trick for fishing things out. It works for dirt too.

Tipps und Tricks 2

When working on or painting small parts, I secure them with double-sided tape.

To keep track of my progress when sanding to the final dimensions, I mark the parts with a marker. That way, you can clearly see how much material has been removed and where.

Drilling by hand is still the best method.

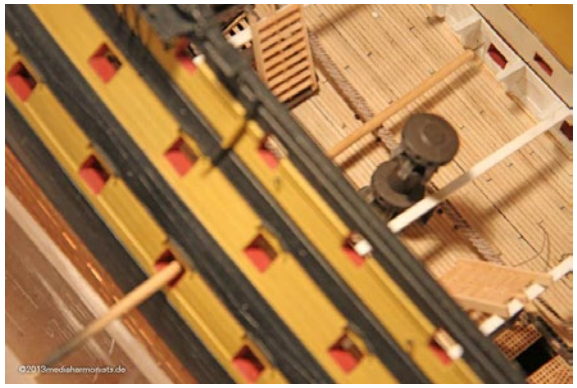
Drilling is a hot topic, especially when using a power tool.

To prevent the plastic from melting and forming lumps on the drill bit, which would make the holes too large, only systems that allow the speed to be reduced significantly are suitable, such as Proxxon's adjustable transformer with an adjustable handpiece.

Otherwise, it is better to drill by hand!

To do this, I've attached various drill bits and needles to kebab skewers.

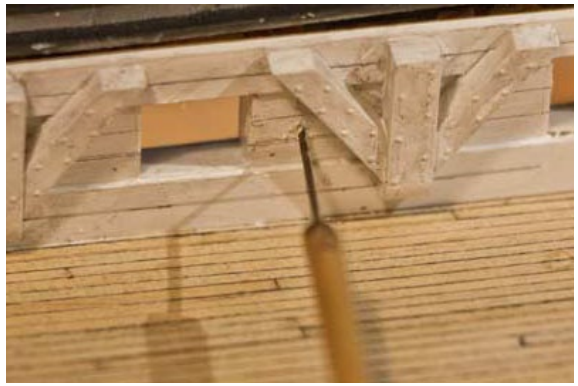
Using the needle on the skewer, I can centre-punch the drill hole through an opposite opening...



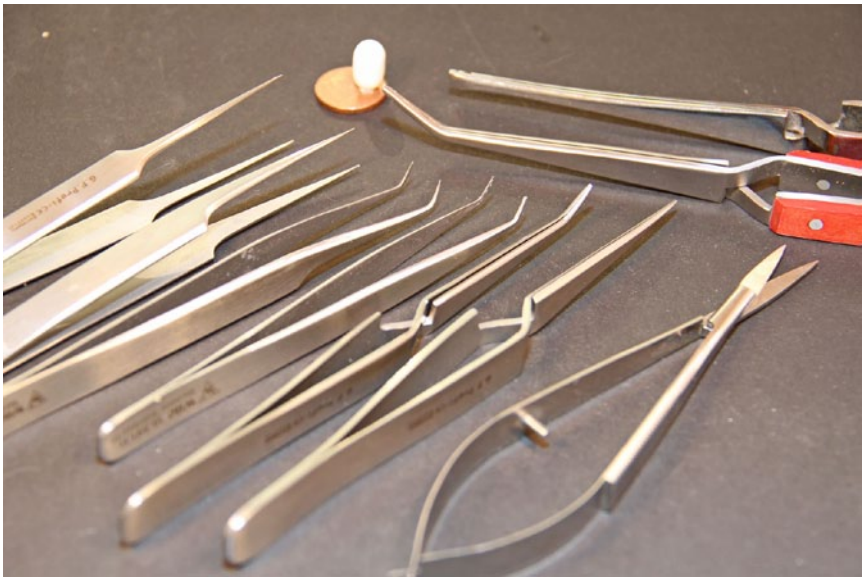
...and then drill.

If the drill bit is secured with tape in such a way that it can bend, it is possible to drill 'around corners', just like with a cardan joint.

Broken tips from thin drill bits are also ideal for making these drill lances, giving them a new lease of life.



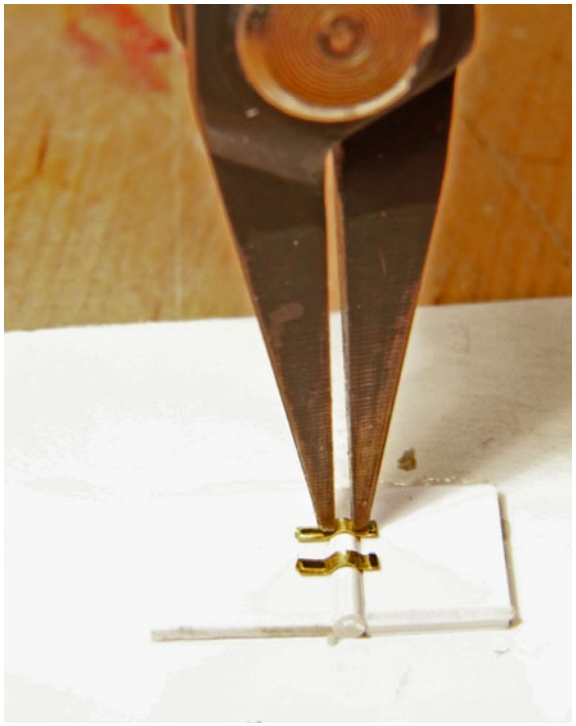
Tweezers and tiny parts



In my experience, sturdy tweezers are an advantage, as they grip the parts well without building up tension in their arms, that makes the parts fly off more easily.

The famous ‘fling’ sound is caused by a build-up of a great deal of catapult-like energy in the arms, which is then suddenly released when the holding angle is exceeded.

To counter this, I therefore use needle-nose pliers to hold the parts whenever possible; the downside is that the pliers don’t usually open by themselves.



With most delicate small parts, I take other precautions anyway.

I’ve already mentioned the cloth attached under the table to stop them falling straight down. Covering the floor with a white sheet helps too. And of course, tidy up your work desk beforehand.

I simply tie many parts to a string anyway. A long, thin piece of string is threaded through a hole in the part, preventing it from flying off and making it easier to find. If there is no hole, I have even stuck the string in place with a tiny amount of superglue.

Other Tools

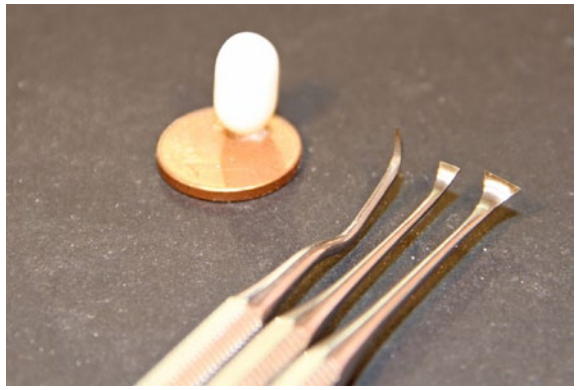
The applicator tips for glue tubes are a real game-changer. Available online for very little money, they allow you to significantly reduce glue consumption and apply the glue with much greater precision.

With the nozzle, I trim the thick lower part so that less glue can accumulate there. Then simply snap it on and the tip will stay in place until the tube is empty.

Interestingly, the glue at the very top of the tip only dries out after quite a while, which means that whilst you're working, the tube is no longer sealed and yet nothing leaks out.

One word of warning: when pressing for glue, check whether glue rises in the tube. If it doesn't rise immediately, stop pressing straight away, otherwise a large amount will find its way out when you cut off the tip.

If the nozzle is blocked, place something underneath for protection and cut off one or two tenths of a millimetre; do the same if the tip has become too thick due to glue residue.



A scaler from a dental supply shop for rescribing planks once moulded-on parts of the kit have been removed.

Other scrapers and scribers are also useful for all sorts of purposes.