THE ART OF BLUEING Doug Minty (Aust)

The art of blueing is a two-fold art. One is that steel parts and screws particularly, really look good and a great contrast against freshly cleaned brass plates. The second part is that, after having cleaned steel parts, you have removed the surface patina, and if you blue the parts, while it won't stop rusting, it will resist it.

TOOLS REQUIRED:	Portagas	Torch,	small	spirit	lamp,	or	а	heat	gun	used	for
	paint strip	ping.									

The slower the heat is, the easier it is to control, and therefore you will get a better result, especially with very small screws.

Two (2) pairs of insulated tweezers which allow you to pick up hot parts without burning your fingers.

A metal container of clean oil to allow you to quench the blued parts, to stop the heat continuing to go past the blue colour required. Any grade of light motor oil can be used, but after quenching a large number of parts, the oil has been burnt and needs replacing. Do no quench the parts in water as this will suck the water into the surface of the metal and will encourage rusting.

A blueing tray made of brass with holes in it. This tray is easy to make. The brass head of the tray should be about 20 mm across by 4mm thick and 50 mm long. The thin wire on which it is mounted, and the wooden file handle, is so that the heat does not affect the person using the blueing tray. A sample picture of the tray is at the end of this article.

Several grades of fine emery or wet & dry paper, e.g.: 600, 800, or 1000. **Do not use** sand or glass paper as used in wood working.

A container of fine, clean sand. (Container must be able to be heated over a flame). Paint fumes will affect the blueing process and therefore, this container or the sand in it, need to be immaculately clean. Sand from the beach is not clean. It is salt in it and many other impurities. This will spot the blueing. You need to find a supply of clean sand.

Blueing salts, which need to be heated to exchange the required temperature of heat to blue the steel part.

<u>SCREWS</u>	The screws must have their heads polished and the slots repaired and re-shaped. Also the threads need to be cleaned and the thread end of the screw must also be polished if this end is visible when the screw is in its correct location.
<u>HANDS</u>	The hands must be polished any dirt or paint cleaned off. It is important to make sure that the ornate edges of hands are cleaned. A caution with hands – as they are of various thicknesses and shapes, care must be taken to make sure the heat is even all over. Hands are often flat on the top side, and it can be easier to blue them upside down.
	If the hands have been repaired with soft solder, they may fall apart when heated. If the hands have been hard soldered together and when blued, if there is a brass coloured line at the soldered joint, this line can be hidden with black paint or a black Texta whiteboard pen.
OTHER PARTS	The same rules as above apply, keeping in mind that the more difficult the shape, the more problems in blueing evenly.
	The parts must be brought to dark blue in colour slowly, as it is very easy to overheat the part. When the part or screw is over-heated, it goes past blue in colour to a dull metal colour. This finish also occurs just before the correct blue is achieved, so it is important to control the rate of blueing. If you go past the correct blue in colour you have to repolish the screw or part and start all over again. You gain nothing by highly polishing the screw or part, especially on a buffing machine. It appears that the blueing colour needs a small amount of graining to give you the best results.
	If you have any questions or comments to make about blueing, please contact Doug Minty: <u>dminty@optusnet.com.au</u>



Blueing Tray from above

Side view of Blueing Tray