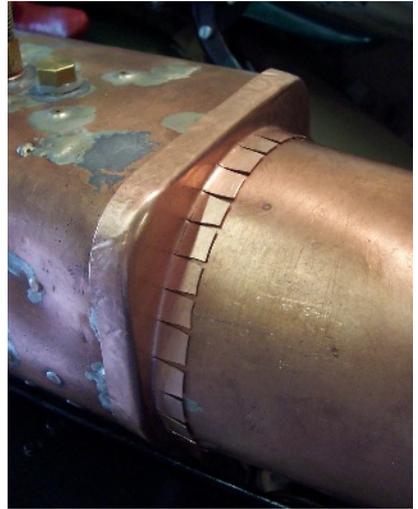


The ups and downs of buying a model steam locomotive.

Part 9: Boiler cladding, painting and lagging - Roger Stephen

Having put a nice flange round the outside of my boiler cladding transition piece (the bit that goes between the round barrel and the more rectangular firebox) I needed to 'flange' the hole that would fit over the boiler barrel. This was actually easy because all I had to do was cut a circular hole about 20mm smaller than the boiler barrel diameter, cut a lot of radial slots out to barrel diameter and bend the resulting 'tabs' forward through a right-angle. A look at the photograph will show what I mean. It may not look pretty but the tabs will all be hidden when the cladding sheet is put round the boiler barrel and secured with a boiler band. Having checked that the transition piece would slide over the boiler top feed bush (it did but only when the top feed fitting was removed!) all I had to do was fettle the cladding sheets.



A trial fitting of the finished transition piece. The 'tabs' will soon be covered up by the barrel cladding sheet and a boiler band.

Being a bit mean I decided to reuse the original cladding sheets although they were soft copper and I would have preferred hard brass. I stripped the paint off (more difficult than expected - perhaps the heat had baked it on), tapped out a few dents on an old panel beater's dolly (easier than expected), and trimmed them here and there to fit properly with tin snips, a very fine coping saw and needle files. To make new ones the trick is to make thick paper patterns that fit perfectly and use them to mark out your sheet metal. I made card patterns to make sure I did not over-trim my existing sheets! Finally my thoughts turned to how I was going to hold this lot together and in the right place: the barrel was OK as it used simple brass boiler bands (think delicate 'Jubilee clips') but what about the firebox cladding? Originally it had been screwed to the outer wrapper but I was not about to drill holes in my newly repaired boiler!

Martin Evans recommends that the firebox cladding sheet is secured by screws into the foundation ring. I did not think much of that as it meant drilling and tapping holes in the boiler, which risks creating a new leak, and my bare boiler was already a snug fit between the chassis frames so there was not really room for the thickness of the cladding and screws as well. My solution was quite elegant I thought! Use the cab to hold the back end of the sheet in place, rivet the front end to my transition piece, and hold the bottom edges in place using the hand pump delivery and bypass return pipes which run along the top of the running boards against the firebox. That way the cladding could not go anywhere and I did not need to drill holes in my boiler! So, I trimmed the bottom edges of the firebox cladding sheet to stop just on the running boards and used a few $\frac{1}{16}$ th copper rivets to fix the cladding sheet to the transition piece.

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The next job was painting the cladding. I was fortunate that the builder of my Princess Marina had apparently used proper LMS crimson lake paint and not some obscure shade of car paint. On testing a swatch of Phoenix Paints' dull finish crimson lake I was relieved to find it was an almost perfect match with the original - meaning I did not need to repaint the whole locomotive and tender. I cleaned and degreased the cladding sheets and the boiler bands and gave them a coat of aerosol etch primer (car paint from Halfords). While that dried and cured I degreased the cab components, painted the inside with Humbrol cream gloss and touched in the chips, etc, on the outside with crimson lake. The cladding sheets then had a coat of crimson lake using the biggest soft sable brush I had (No 6 I think) but, whilst the excellent Phoenix paint covered superbly, the finish was not brilliant so I gave them a second coat using an ordinary half inch domestic decorating brush with much better results! I don't really recommend it though - its just that I was impatient to get the loco back together and running and I was lucky to get away with it. Spray painting would be the best method.



Trial fitting of the cladding. The firebox cladding has been riveted to the transition piece and the barrel cladding sheet is held by elastic bands.

The need for boiler lagging in model scale is debatable. Full size locos have 3 or 4 inches (75 to 100mm) of lagging which provides a lot of thermal insulation and keeps surface temperatures down, but the $\frac{1}{16}$ th inch (1.5mm) or so of lagging on a model provides virtually nothing. However, put holes in the lagging where the handrail stanchions go and you have



The firebox cladding is in place over its lagging and the lagging is on the barrel. The strips of woven glass fibre tape were stuck together in a sheet using masking tape and then wrapped round the boiler.

tiny spaces for the thin nuts that secure them to the cladding and hence less distortion of the cladding sheet when the boiler bands are tightened. Therefore, before fitting the cladding on my boiler I put the original lagging back on which was strips of woven glass fibre tape (admittedly not very thick) held together with masking tape. Masking tape may not seem the ideal adhesive but all it had to do was hold the glass fibre tape in place while the cladding sheets were fitted. It worked fine.

(to be continued)