LNER COACH ASSOCIATION

ESTABLISHED ON THE NORTH YORKSHIRE MOORS RAILWAY

DRAFT Specification for replacement of roof boards.

Timber for replacement roof boarding is to be good quality Redwood and should be free of large knots and other defects. Machined sizes of boarding to be determined from available drawings, archive material and on site mesurments.

If a large area of the roof is to be replaced then the boarding should be replaced in stages so as not threaten the integrity of the coach. The steel hoopsticks should be cleaned of rust and painted.

The centre roof board, which has a groove on both edges should be positioned and fixed first. Subsequent boards should be fixed two at a time, with one each side of the centre board. The boards should be well cramped together using band cramps and floorboard cramps.

On coaches with elliptical ends the boards which run through to the end of the roof should be at least two feet longer than required, a lifting strap placed over the top of them and winch connect between the boards and a shackle fastened to the drawbar. The boards should then be pulled down gradually to meet the frame work, if it is required then very hot water should be poured over boards to help them to flex.
When the boards are securely fixed the winch should be removed and the boards trimmed to length.

The renewed area of roof boarding must then have any small ridges removed by planing and sanding. Any exposed boarding must then receive two good coats of wood preservative (Allowing the boards to thoroughly dry between coats.) before canvassing.

DRAFT Specification for replacement of roof canvas.

Any remaining fittings, guttering, cornice and canvas must be carefully removed, as must any loose pieces of old bedding compound. The fixings holding the roof boards should tested and any screws, which aren't holding replaced by coach bolts. The roof must be checked carefully for ridges or any other areas which might wear the canvas, these should then be dressed down to leave the roof totally smooth.

Material specifications:-

1. Roof canvas - specification, not yet finalised.
2. Liquid Plastics ltd. - Bonding primer.
3. Liquid Plastics ltd. - Firecheck (a water borne polymer, which cures to a form a fire retardant flexible synthetic rubber.)
4. Liquid Plastics Ltd. - Remat Flexitape. - stretchable synthetic bandage
5. Galvanised Clout nails.

Also required several special tools, which consist of a flat board 6"x4" with an array of nails through it, which are about ¼" longer than the thickness of the board, these should be angle one way to form a direction of pull. The smooth side of the board should have a strong handle attached, which should be comfortable to hold and pull on.

Reference should be made to Liquid Plastics Ltd's data sheets with regard to curing and re-coating times.

Paint the roof with bonding primer and allow to cure over night. Lay the new canvas out on the roof, so as it in its final position. Then roll the canvas up from each end towards the middle. Starting on one side of the rolled up canvas, paint about one metre of the roof with a layer of Firecheck about five millimetres thick. Roll the canvas out over the painted area. With people on scaffold on both sides of the roof and in front of and behind the canvas on top of the roof, pull the canvas tight with the special tools, so as the Firecheck is forced through the weave of the canvas. Nail the canvas to the cant rails and brush out the paint over the canvas. Repeat until all the roof is covered and allow to cure.
Apply another coat of Firecheck. Fit cornices gutters and roof fittings beading on with acrylic mastic. Apply Flexitape over vulnerable areas, (gutters, cinder mouldings, joints between roof and cornice) sticking it down with firecheck. Apply at least two more coats of Firecheck.