

RUBBER LINING OF STEEL CONDENSER DOORS

The following notes on the preparatory work to be carried out on steel condenser doors and waterboxes, before they are rubberized by contractors, are given for the guidance of repair authorities and should be read in conjunction with A.F.O. 186/49.

Surfaces

All metal surfaces to be covered with rubber must be thoroughly cleaned, so that they are entirely free from imperfections such as scale and laminations. Shot or sand-blasting, grinding, or wire brushing may be used.

Pitting

All pits and cavities caused by corrosion or erosion are to be reasonably filled in and smoothed off by welding and grinding. Shallow pits should be ground out so that they become shallow depressions with easy contours and without edges. Deep cavities should be filled by welding, and the filling ground flush with the surface.

Welding

Welds including original fabrication are to be smooth, without porosity, holes, lumps, or pockets. Peening may be carried out to eliminate porosity, and final grinding with a 24 grain, grade 'Q' wheel (or finer) is essential to make the weld smooth enough for rubber lining. All slag and weld spatter is to be ground off.

Corners and Edges

All sharp edges are to be removed, and are to be rounded. All corners and edges are to have a radius greater than $\frac{1}{4}$ in.

Bosses for Connections

It is a general principle of rubber-lining that water must not have access to the bond. It follows that free edges of the rubber lining must not occur, but that the lining must be carried across the faces of flanges, so that the lining is nipped when the flanges are bolted up.

To fulfil this condition, it is necessary to modify tapped bosses for air cocks. This may be carried out either by fitting a larger pad, or by fitting an extension tube of not less than $\frac{3}{4}$ in bore. In both cases, a loose flange must be provided, tapped to suit the air cock, and drilled to mate with the enlarged pad or with the flange on the extension tube, as the case may be.

Stud Holes

Where the doors and waterboxes are held together by studs (in way of the main inlet and discharge connections), the inside end of the tapped studhole in the waterbox is to be blanked off. The blank should be welded in, and need not exceed $\frac{1}{8}$ in in thickness. The welding should then be ground flush with the surface, in the usual manner.

Internal Holes

Small vent holes in the division plate of the waterboxes should be enlarged to permit the $\frac{1}{8}$ in rubber lining to be applied in their bores. The edges of the enlarged holes should be radiused, vide para. 5 above.—(*Dockyard Engineering Technical Memorandum No. 17.*)