

“A” BRACKET AND STERN TUBE BUSHES LIMITS OF WEAR

Investigation has indicated that there is considerable divergence of practice at the different Yards in connection with the limits of wear allowed in “A” bracket and stern tube bushes before re-lining is carried out. It has accordingly been decided to issue rules for guidance in this connection as given below, these rules having been prepared in light of existing Yard practice and in consultation with the Engineer-in-Chief.

It is emphasized that the decision regarding the necessity for re-lining “A” bracket or stern tube bearings at any time must depend on a number of factors which cannot be precisely covered in any rules and that the final decision must therefore rest on individual judgment, having regard to all the circumstances. The figures given in the table below are therefore issued for general guidance only and are not in the nature of a hard and fast regulation.

Factors which have an important bearing on the decision whether or not to re-line “A” bracket or stern tube bushes are as follows :—

- (a) the rate of wear which has obtained between successive dockings in the past, due allowance being made for initial high rates of wear, which are sometimes experienced after re-lining bearings ;
- (b) past service and prospective future service of the ship ;
- (c) probable next occasion when re-lining of bearings could be carried out.

The general aim should be that the limiting clearance should not be exceeded, nor should the minimum of lining to wear fall below the figures given in the table, at any time. Renewals of bearing linings should be carried out as necessary, having regard to the above factors, if the limiting clearances or minimum to wear is likely to be reached before the next occasion when renewal will be possible.

	Lining material	Initial clearance	Limiting worn clearance	Minimum to wear
SURFACE SHIPS	White Metal (a) Grease Lubd.	As on “As fitted” Drawings = A	$A + \frac{8D}{1000}$	$\frac{1}{16}$ ”
	(b) Oil Lubd. with Patent Glands		$.022 + \frac{4D}{1000}$	$\frac{1}{16}$ ”
	Lignum Vitae		$A + \frac{9D}{1000}$	$\frac{1}{8}$ ”
	Rubber		$A + \frac{9D}{1000}$	$\frac{1}{16}$ ”
S/Ms.	White Metal or Lignum Vitae		$A + \frac{6D}{1000}$	$\frac{1}{16}$ ”

The table above gives the limiting worn clearance and minimum amount of wood, metal, or rubber to wear for the various types of lining employed. The table is intended to apply to “A” bracket bearings. In the case of stern tube bearings consideration has also to be given to the eccentricity of the

shaft in the gland neck ring, and also to considerations of alignment. For this reason it may be desirable to work to somewhat lower clearances for stern tube bearings than for "A" bracket bearings, but in any case, the limiting clearances applicable to "A" bracket bearings should not be exceeded.

If in any case "as fitted" drawings indicating the designed initial clearance are not available the following rules give an approximation to this clearance :—

White metal bearings, grease lubricated	$A = \frac{12}{1000} + \frac{\text{diameter}}{1000}$
Lignum vitae bearings for surface ships	$A = \frac{25}{1000} + \frac{2 \text{ times diameter}}{1000}$

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