

COPY

# LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

71, Fenchurch Street London, E.C.3

Telegrams: Committee, Fen, London

Telephone: ROYal 3551 (6 Lines)

-2-

12th June, 1952.

Ref. Eng.

Dear Sirs,

"PAMIR" and "PASSAT" - Propellers.

I have to acknowledge the receipt of your letters and enclosures of the 20th and 26th ultimo in connection with the failure of the propellers of the above vessels, and forwarding plans of the proposed replace propellers, the contents of which have been carefully noted.

The stresses in these propellers have been evaluated by a method of calculation adopted as standard by Marine Industry in the United Kingdom and have been found, for the old and new designs respectively, to be about four times and twice that considered by British practice to be a safe working stress.

While the Society has no rules for propeller scantlings, it is recommended in view of the service failures, that the propeller be redesigned to give at the blade critical section a working stress of about 1/4 of the stress in the original design.

It should be noted that the calculations for stress were based on the following assumptions:

- 1) Material - Manganese Bronze of rule strength.
- 2) Ship speed - 7 Knots.

It would seem from Troost curves that the propeller is only capable of absorbing 610 B.H.P. at 350 R.P.M.

P.T.O.



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*note  
made 17/6/52*



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UNITED WITH THE BRITISH CORPORATION REGISTER

71, Fenchurch Street, London, E.C.3

Telephone: 4071 (10 lines)

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-2-

12th June, 1932.

In the circumstances, I have telegraphed you today, as follows:-

REYURLET 20TH MAY PAMIR PASSAT NEW PROPELLER DESIGN GIVES WORKING STRESSES ABOUT TWICE BRITISH PRACTICE AND NOT CONSIDERED SATISFACTORY STOP LETTER FOLLOWING

I have to acknowledge the receipt of your letters and enclosures of the 20th and 22nd instants in connection with the design of the propellers of the above vessels, and following plans of the proposed propellers, the contents of which have been carefully noted.

Yours faithfully,

*Copy to Mr. Rungman*  
pro Secretary.

The stresses in these propellers have been calculated by a method of calculation adopted as standard in the United Kingdom and have been found, for the old and new designs respectively, to be about four times and twice that considered by British practice to be a safe working stress.

The Surveyors,  
DUSSELDORF.

While the Society has no rules for propellers, it is recommended in view of the service required, that the propeller be redesigned to give at the blade external section a working stress of about 1/4 of the stress in the original design.

It should be noted that the calculations for stress were based on the following assumptions:

- (1) Material - Manganese Bronze of like strength.
- (2) Ship speed - 7 knots.

It would seem from Trossat curves that the propeller is only capable of absorbing 610 H.P. at 380 R.P.M.

P.T.O.

*Handwritten signature and date 12/6*

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