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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)

-3-

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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Lloyd's Register
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LLOYD'S REGISTER OF SHIPPING

UNITED WITH THE BRITISH CORPORATION REGISTER

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

Telephone: LONDON 3221 (8 Lines)

Telegrams: "Commlite", 150, London

-2-

12th June, 1932.

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

REYURLET 20TH MAY PANIR 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 letter and enclosures of the 20th and 22nd insts in connection with the design of the propellers of the above vessels, and the design of the proposed replacement propellers, the contents of which have been carefully noted.

Yours faithfully,

The stresses in these propellers have been calculated by a method of calculation adopted as standard by the 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.

The Surveyors,

RUSSELLDORF.

While the Society has no rules regarding the design of propellers, 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 1/2 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 Troost curves that the propeller is only capable of absorbing 610 H.P. at 380 R.P.M.

E.E.O.