Torsional vibration measurement and calculation for sailing vessels "Passat"and "Pamir".

Type F 46a-6 pu
Work No. 605 918

Elaborator: Behrmann Date 3.7.52 Reg.No. MKL 121A)

Installation: F 46a 6pu engine for direct propeller drive
max. revolution of engine n = 350 R.p.M.,
capacity N = 900 BHP.

The results of the torsional vibration measurements have been stated in our report MKL 121 on the "PAMIR". There had been installed a two-bladed propeller of Messrs. Ostermann with a centrifugal moment GD^2 = 290 kg m^2. With these propellers the n_{I6} is at a operating speed n = 350 min^{-1}. The Owners have been informed that for both installations in the lower radius of action with every speed can be operated up to the range n = 291 ÷ 299 min^{-1}. and over this range it is only allowed to operate with a speed n = 322.

original 250 kgm² I/6 ø 379RM

These last-named propellers will be changed finally for such two-bladed bronze propellers with a centrifugal moment GD^2 = 416 kg m^2 at a weight of 730 kg.

The progress of the torsional vibration stresses will be then as shown on MKL B1.3.

For the Ship "Passat" in the whole radius of action a preserving range of n = 291 ÷ 308 min^{-1} will be resulted at n_{II12} and n_{I6} and for "Pamir" of n = 291 ÷ 314 min^{-1}.

At both ships can be operated at the highest operating speed with n = 350 min^{-1}. The controlling engineers of the machinery installations are to be advised about the above by this report.

Kiel, 3rd July, 1952.
MKL+Beh/Ma.