

Inspection during manufacture and testing of the Electrical Propelling Motor, Alternators and Control Gear at Messrs. British Thomson-Houston Co. Ltd., Rugby, and intended for Messrs. Swan Hunter's Yard No. 1711

### ALTERNATORS.

It was not possible to carry out a full load heat run on the alternators, but short circuit, open circuit and no field heat runs were carried out with the machines on open ventilation, and it should be noted that the heat runs on the alternators were carried out equivalent to 5,000 kVA, 4,080 R.P.M., 68 cycles, which correspond to 120.5 R.P.M. on the propeller in the case of both Port and Starboard alternators, also at 3,060 R.P.M., 51 cycles, 4,200 kVA on the Port Alternator only and which corresponds to 90.5 R.P.M. on the propeller.

From the results obtained during the foregoing heat runs the expected temperature rises were calculated in the usual manner and indicated that the temperature rises would comply with the Rules.

During the above tests and when the alternator rotors were run separately on overspeed for five minutes the mechanical balance was found to be satisfactory.

### PROPULSION MOTOR.

When the motor is running on or near full shunt field excitation, noise and vibration are negligible.

Short circuit and open circuit heat runs were carried out on the machine with fans running at full load, but it was not possible to connect the air coolers in circuit.

The Committee has approved the Manufacturers' request for a further 10°C rise above the present Rule requirements (Appendix 4, Table I) for Propulsion Machines for vessels classed or intended for classification with this Society, provided the temperature of cooling air entering the machine does not exceed 103°F.



Under these conditions the expected full load temperature rise as calculated in the usual manner from the temperatures obtained during the foregoing heat runs, indicated that the motor would comply with the Society's requirements when operating at 13,000 S.H.P., 916 amperes and 120 R.P.M.

#### CONTROL GEAR.

The control desk, cubicle, excitation panel, etc. were fully erected at the Makers' Works. The lever operating gear was also erected, but it was not possible to connect up the lever operating desk and connecting rods to the main cubicle. The camshaft of the main control cubicle was rotated separately and found satisfactory.

The interlocking and independent operation of the lever operating desk was separately checked and found satisfactory.

Test Reports for the above equipment are attached to this Report.

*F. H. Tiskell*

*Seen by G.O.W.  
for Mr. Tiskell.*



© 2020

Lloyd's Register  
Foundation

0076 2/2