

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

NOV 14 1940

Received at London Office

Date of writing Report 7th Nov 1940. When handed in at Local Office 7th Nov 1940. Port of DundeeNo. in Survey held at Dundee Date, First Survey 14th Sept Last Survey 2nd Nov 1940
Reg. Book. (Number of Visits... (2).....)

90209 on the s/s "TWICKENHAM"

Tons { Gross 4462.
Net 2663.

Built at Dundee By whom built Caledon S. B. & Co. Ltd. Yard No. 385 When built 1940

Owners Britain S.S. Co. Ltd. Port belonging to London

Electric Light Installation fitted by Jelford Gries Mackay & Co. Ltd. Contract No. ✓ When fitted 1940

Is the Vessel fitted for carrying Petroleum in bulk No.

System of Distribution

Two Wires

Pressure of supply for Lighting 110 volts, Heating ✓ volts, Power 110 volts.

Direct or Alternating Current, Lighting Direct Power Direct.

If alternating current system, state frequency of periods per second ✓

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off ✓

Generators, do they comply with the requirements regarding temperature rise ✓, are they compound wound ✓
are they over compounded 5 per cent. ✓, if not compound wound state distance between each generator ✓

Where more than one generator is fitted are they arranged to run in parallel ✓, is an adjustable regulating resistance fitted in series with each shunt field ✓

Have certificates of test results for machines under 100 kw. been submitted and approved ✓

Are all terminals accessible, clearly marked, and furnished with sockets ✓, are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched ✓

Position of Generators Main Engine Room. Starboard, is the ventilation

in way of the generators satisfactory ✓, are they clear of all inflammable material ✓, if situated near unprotected
woodwork or other combustible material, state distance of same horizontally from or vertically above the generators No woodwork near.

are the generators protected from mechanical injury and damage from water, steam or oil ✓, are their axes of rotation fore and aft ✓

Earthing, are the bedplates and frames of the generating plant efficiently earthed ✓, are the prime movers and their respective generators
in metallic contact ✓ Main Switch Boards, where placed In proximity of GeneratorsIf the generators and main switchboard are not placed in the same compartment, is each generator provided with
a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard ✓Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes ✓, are they protected from mechanical
injury and damage from water, steam or oil ✓, if situated near unprotected woodwork or other combustible material, state distance of same
horizontally from or vertically above the switchboards No woodwork near.

materials ✓ Sindanyo, is all insulation of high dielectric strength and of permanently high insulation resistance ✓

is it of an approved type ✓, if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micanite or other
non-hygroscopic insulating material, and the slab similarly insulated from its framework ✓, is the non-hygroscopic insulating material of an approved
type ✓, and is the frame effectively earthed ✓Are the fittings as per Rule regarding: — spacing or shielding of live parts
yes, accessibility of all parts ✓, absence of fuses on back of board ✓, temperature rise of
omnibus bars ✓, individual fuses to voltmeter, pilot or earth lamp ✓, are moving parts of switches alive in the"off" position No, are all screws and nuts securing connections effectively locked ✓, are any fuses fitted on the live side of
switches No.

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches

Double Pole Switch & fuses for Generator & for each outgoing circuit

Are turbine driven generators fitted with emergency trip switch as per rule ✓ Are cupboards or compartments containing switchboards composed of

fire-resisting material or lined with approved material ✓ Instruments on main switchboard one ammeters one

voltmeters ✓ synchronising device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system

Earth lamps Switches, Circuit Breakers and Fusible Cut-outs,

do these comply with the requirements of the Rules ✓, are the fusible cutouts of an approved type ✓, have the reversed

All Conductors are of annealed copper conforming to British Standard Specification No. 7 (or International Electro-technical Commission Publication No. 28).

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

Telford Green Mackay, Esq. & Co.

Electrical Engineers.

Date *7/11/40*

COMPASSES.

Distance between electric generators or motors and standard compass *136 ft.*

Distance between electric generators or motors and steering compass *130 ft.*

The nearest cables to the compasses are as follows:—

A cable carrying *10* Ampères *12* feet from standard compass *5* feet from steering compass.

A cable carrying *2* Ampères *one* feet from standard compass *one* feet from steering compass.

A cable carrying *✓* Ampères *✓* feet from standard compass *✓* feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power *yes* ✓

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted

The maximum deviation due to electric currents was found to be *nil* degrees on *all* course in the case of the standard compass, and *nil* degrees on *all* course in the case of the steering compass.

FOR AND ON BEHALF OF
THE CALEDON SHIPBUILDING & ENGINEERING CO. LTD.

J. H. Houston

Builder's Signature.

Date *7/Nov/1940*

DIRECTOR.

Is this installation a duplicate of a previous case *yes* ✓ If so, state name of vessel *s/s "Tottenham"*

General Remarks (State quality of workmanship, opinions as to class, &c.)

This Installation has been efficiently fitted on board; the wiring has been carried out in accordance with the Rules & the approved plans, the materials & workmanship being sound & good.

On completion the installation was tried out under full load & working conditions, & it was found satisfactory in all respects.

Noted

J. H.

19/11/40

Total Capacity of Generators *15* Kilowatts.

The amount of Fee ... £ *15 : 0 : 0*
4/5ths Dun. = £ 12-0-0
1/5th Gls. = £ 3-0-0
Traveling Expenses (if any) £

When applied for,
8/11/1940

When received,
3.12.40

John Houston

Surveyor to Lloyd's Register of Shipping.

GLASGOW 12 NOV 1940

Committee's Minute

SEE ACCOMPANYING MACHINERY REPORT

Assigned



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Lloyd's Register
Foundation