

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report. 23rd Mar. 1939 When handed in at Local Office. 29 MAR 1939 Received at London Office. MAR 30 1939

No. in Survey held at Sunderland Date, First Survey 7th February Last Survey 22nd March 1939
Reg. Book. Suppl. (Number of Visits. 2)

87308 on the S.S. "BRETWALDA" Tons { Gross 4906
Net 2766

Built at Sunderland By whom built J. L. Thompson & Smith, Ltd. Yard No. 591 When built 1939

Owners Hall Bros. & Co. Ltd. Port belonging to Newcastle

Electrical Installation fitted by The Sunderland Engineering Co. Ltd. Contract No. 591 When fitted 1939

Is vessel fitted for carrying Petroleum in bulk No Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. No Sub.Sig. No

Have plans been submitted and approved. Yes System of Distribution Double wire Voltage of supply for Lighting 110

Heating. Power 110 Direct or Alternating Current, Lighting Yes Power Yes If Alternating Current state frequency. Prime Movers,

has the governing been tested and found efficient when the whole load is suddenly thrown on and off Yes Are turbine emergency governors fitted with a

trip switch as per Rule. Generators, are they compound wound Yes, are they level compounded under working conditions Yes,

if not compound wound state distance between generators. and from switchboard. Where more than one generator is fitted are they

arranged to run in parallel. are shunt field regulators provided Yes Is the compound winding connected to the negative or positive pole

Positive Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing. Have certificates of

test for machines under 100 kw. been supplied. Yes and the results found as per rule Yes Are the lubricating arrangements and the construction

of the generators as per rule. Yes Position of Generators Engine room starboard side aft

, is the ventilation in way of generators satisfactory Yes are they clear of inflammable material Yes, if situated

near unprotected combustible material state distance from same horizontally. and vertically. are the generators protected from mechanical

injury and damage from water, steam and oil. Yes, are the bedplates and frames earthed. Yes and the prime movers and generators in metallic

contact. Yes Switchboards, where are main switchboards placed Engine room starboard side on

aft bulkhead

are they in accessible positions, free from inflammable gases and acid fumes Yes, are they protected from mechanical injury and damage from water, steam

and oil. Yes, if situated near unprotected combustible material state distance from same horizontally. and vertically. what insulation

material is used for the panels. Slate, if of synthetic insulating material is it an Approved Type. if of

semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule. Yes Is the frame effectually earthed. Yes

Is the construction as per Rule. Yes, including accessibility of parts Yes, absence of fuses on the back of the board Yes, individual fuses

to pilot and earth lamps, voltmeters, etc. Yes locking of screws and nuts Yes, labelling of apparatus and fuses Yes, fuses on the "dead"

side of switches. Yes Description of Main Switchgear for each generator and arrangement of equaliser switches. Double pole

Knife switch and double pole fuse.

and for each outgoing circuit Single pole knife switch and double pole fuse

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule. Instruments on main switchboard One

ammeters One voltmeters. synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection. Earth Testing, state means provided Edamps coupled to E through two fuses

Navigation Lamps, are they separately wired Y controlled by separate Y

~~single~~ pole switches Y ^{D.R.} and fuses Y Are the switches and fuses in a position accessible only to the officers on watch Y, is an automatic indicator fitted Y

Secondary Batteries, are they constructed and fitted as per Rule _____, are they adequately ventilated _____

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof Y Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present _____, if so, how are they protected _____

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampres.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	1	15	110	137	550	Single cyl. steam engines		
EMERGENCY								
ROTARY TRANSFORMER								

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULA- TED WITH.	HOW PROTECTED.
		No. in Parallel For Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	15	1	19/272	137	157	44	V.C.	L.C.A. in pipe
" " EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

[illegible]

WIRELESS	1	7/1036	15/20	24	360	V.I.R.	In pipe & L.C.B.
NAVIGATION LIGHTS	1	3/1036	14	12	360	V.I.R.	In pipe & L.C.B.
LIGHTING AND HEATING							
Saloon & fwd. Cargo Ltg. D.B.s	1	7/024	6+5	31	360+120	V.I.R.	In galv. pipe
Aft. Cargo Ltg. D.B.	1	7/029	6	18.2	200	V.I.R.	In galv. pipe
Aft. Saloon Ltg. D.B.	1	7/026	8	24	300	V.I.R.	In galv. pipe
Engs.' Saloon Ltg. D.B.	1	3/1036	10	12	60	V.I.R.	L.C.B.
Saloon Ltg. D.B.	1	7/029	12	18.2	250	V.I.R.	In galv. pipe
Connection for searchlight *	1	7/024	—	31	96	V.I.R.	L.C.B.
Notes & 2d power cargo lighting S.B. with C.O. switch, including either cargo lighting D.B.s or searchlight to be supplied.							

[illegible]

The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.
All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.
The foregoing is a correct description.

James *Sunderland* *Longerby* *to St.* Electrical Engineers. Date *25. 3. 1939*
A.S. Gurney

COMPASSES.

Minimum distance between electric generators or motors and standard compass *180 feet*

Minimum distance between electric generators or motors and steering compass *176 feet*

The nearest cables to the compasses are as follows:—

A cable carrying *.14* Ampères *on the* feet from standard compass *12* feet from steering compass.

A cable carrying *.14* Ampères *12* feet from standard compass *on the* 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 *Yes*

The maximum deviation due to electric currents was found to be *his* degrees on *every* course in the case of the standard compass, and *his* degrees on *FOR AND ON BEHALF OF JOSEPH THOMPSON & SONS, LIMITED.* course in the case of the steering compass.

R. S. Thompson Builder's Signature. Date

Managing Director

Is this installation a duplicate of a previous case *No* If so, state name of vessel

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.) *The electrical equipment of this vessel has been installed under special survey. The materials used and the workmanship are good. On completion the equipment was run under working conditions, the governing, compounding and regulation of the generating set was tested and the insulation resistance of all circuits was measured. This equipment is, in my opinion, suitable for a classed vessel.*

Noted
4/4/39

Total Capacity of Generators *15* Kilowatts.

The amount of Fee ... £ *15* : — : *When applied for, 29 MAR 1939*

Travelling Expenses (if any) £ : : *When received, 14. 4. 1939*

Stanton

Surveyor to Lloyd's Register of Shipping.

WEC 12 APR 1939

Committee's Minute

Assigned *See Old. 76 32601*