

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office..... 18 MAR 1948

Date of writing Report... 7.3.1948 When handed in at Local Office... 14th March 1948 Port of Sunderland
 No. in Survey held at Sunderland Date, First Survey 5.1.48 Last Survey 8.3.1948
 Reg. Book. (Number of Visits... 15...)
 on the S.S. "COMPHINA"
 Built at Sunderland By whom built J. T. Thompson & Son Ltd Yard No. 655 When built 1948
 Owners _____ Port belonging to Widnes Ltd, Warrington
 Electrical Installation fitted by Sunderland Forge & Eng. Co. Ltd Contract No. 655 When fitted 1948
 Is vessel fitted for carrying Petroleum in bulk Yes Is vessel equipped with D.F. No E.S.D. No Gy.C. No Sub.Sig. No

Have plans been submitted and approved Yes System of Distribution Low wire insulated Voltage of supply for Lighting 110
 Heating Yes Power 110 Direct or Alternating Current, Lighting Yes Power Yes If Alternating Current state periodicity — Prime Movers,
 has the governing been tested and found as per Rule when full 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 No, are shunt field regulators provided Yes Is the compound winding connected to the negative or positive pole
Negative 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 situated on raised floor
—, 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 on raised floor near generators
—
 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 Heavy "Kindalene", if of synthetic insulating material is it an Approved Type Yes, if of
 semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule — 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 2 double-pole, single
 throw quick-break knife switch and double pole cartridge type fuse.
—
 and for each outgoing circuit as per above, but double throw switch.
—
 Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 2
 ammeters 2 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 5 lamps connected to E through fuses & fuses.
 Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an approved type Yes, are all fuses labelled as
 per Rule Yes If circuit breakers are provided for the generators, at what overload current did they open when tested —, are the reversed current
 protection devices connected on the pole opposite to the equaliser connection —, have they been tested under working conditions, and at what current
 did they operate — Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule Yes
 Cables, are they insulated and protected as per the appropriate Tables of the Rules Yes, if otherwise than as per Rule are they of an approved type —,
 state maximum fall of pressure between bus bars and any point under maximum load > 6V, are the ends of all cables having a sectional area of 0.04
 square inch and above provided with soldering sockets Yes Are paper insulated and varnished cambric insulated cables sealed at the ends Yes

PARTICULARS OF GENERATING PLANT.

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rate.			
MAIN GENERATOR 1...	25	1	37.072 ✓	227	246	36	VC	L.C.A.B.
" " EQUALIZER								
" " 2...	25	1	37.072 ✓	227	246	52	Y.C.	L.C.A.B.
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

DESCRIPTION.

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	...	off	5.2	...	...	1	7/029	5	15	42	YIR	L.C.
NAVIGATION LIGHTS	...	off	5.1	...	...	1	1/064	3	5	66	"	"
LIGHTING AND HEATING	...	all supply	off	5.2	...	1	1/064	-	5	36	"	"
Trav. Bridge	...	...	...	...	...	1	7/044	20	31	66	"	"
Tridship	...	...	...	...	...	1	7/044	23	31	36	"	"
"	...	Star	D.3	"	...	1	7/044	27	31	60	"	"
Instrument	...	...	...	...	...	1	7/044	11.6	31	36	"	"
Power	...	...	...	...	...	1	7/044	10.9	31	54	"	"
Fuel	...	...	...	...	...	1	7/044	4.3	31	12	"	"
Forecast	...	...	...	...	...	1	7/036	3.2	24	26	"	"
Crew	...	...	...	...	...	1	7/064	41	75	180	VE	"
"	...	Star	D.5	"	...	1	7/064	46	75	84	"	"
Off	...	...	...	...	...	1	1/064	2.5	10	180	YIR	"
Engine	...	...	...	...	...	1	7/064	25	46	13	"	"
Riches	...	...	...	...	...	1	7/064	25	46	14	"	"
Shore	...	...	...	...	...	1	37/072	-	246	208	VE	L.C.R.D.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
Thornhill Hirsch	1	3	1	7/04/4	20.4	31	24	V.I.R.	L.C.
"	1	3	1	7/04/4	20.4	31	96	"	"
Guthrie Exhaust Fan	1	1	1	1/06/4	14.5	5	150	"	"
B. Lee York Road	2	4	1	7/05/2	35	27	100.10	"	"

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.

Sunderland Forge Coy Ltd
J P Gurney

Electrical Engineers.

Date *13-5-1948*

COMPASSES.

Minimum distance between electric generators or motors and standard compass *24'*

Minimum distance between electric generators or motors and steering compass *30'*

The nearest cables to the compasses are as follows:—

A cable carrying *.15* Ampères *12* feet from standard compass *on the* feet from steering compass.

A cable carrying *.15* Ampères *on the* feet from standard compass *12* 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 *nil* degrees on *every* course in the case of the standard compass, and *nil* degrees on *every* course in the case of the steering compass.

JOSEPH L. THOMPSON & SONS, LIMITED

Builder's Signature.

Date *16-3-48.*

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

Plans. Are approved plans forwarded herewith *No.* If not, state date of approval *31.10.47*

Certificates. Are certificates of test for ~~motors engaged on essential services and~~ generators forwarded herewith *yes*

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 in accordance with the approved plans and the "Rules for Electrical Equipment". The materials and workmanship are good: On completion the generators operated satisfactorily on load and the insulation resistance of each circuit was measured and found good. This equipment is in my opinion suitable for a classed vessel.

note. See 5/4/48

Total Capacity of Generators *(2x25) 50* Kilowatts.

The amount of Fee ... *£47. 10. 0.* When applied for, *MAR 17 1948*

Travelling Expenses (if any) £ : : When received, 19.

Committee's Minute *FRI. 16 APR 1948*

Assigned *See F.E. mch. rpt.*

B. D. Mann

Surveyor to Lloyd's Register of Shipping.