

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

15 AUG 1946  
Received at London Office

Date of writing Report.....19..... When handed in at Local Office.....14 AUG 1946..... Port of.....SUNDERLAND.....

No. in Survey held at.....SUNDERLAND..... Date, First Survey.....2.7.46..... Last Survey.....3.8..... 1946.....  
Reg. Book..... (Number of Visits.....8.....)

74030 on the.....S/S "GANESELLA"..... Tons { Gross.....524.2  
Net.....247.2

Built at.....SUNDERLAND..... By whom built.....J.L. THOMPSON & SONS LTD..... Yard No.....645..... When built.....1946.....

Owners..... Port belonging to.....

Electrical Installation fitted by.....SUNDERLAND FORGE & ENGINEERING CO. LTD..... Contract No.....645..... When fitted.....1946.....

Is vessel fitted for carrying Petroleum in bulk.....YES..... Is vessel equipped with D.F.....-..... E.S.D.....-..... Gy.C.....-..... Sub.Sig.....-

Have plans been submitted and approved.....YES..... System of Distribution.....TWO WIRE INSULATED..... Voltage of supply for Lighting.....110.....

Heating.....-..... Power.....110..... Direct or Alternating Current, Lighting.....D.C..... Power.....D.C..... 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.....-....., 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, NO.1, FORD., OUTBOARD. NO.2 AFT INBOARD.....

....., 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, STBD. ON PLATFORM.....

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.....FRONY SINDANYO....., 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.....DOUBLE POLE Q.B.

SWITCH AND DOUBLE POLE FUSE FOR NO.1 GENERATOR DOUBLE POLE DOUBLE THROW Q.B. SWITCH

AND DOUBLE POLE FUSE FOR NO.2 GENERATOR AND SHORE SUPPLY.

and for each outgoing circuit.....DOUBLE POLE, DOUBLE THROW Q.B. SWITCH AND DOUBLE POLE FUSE.....

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.....EARTH LAMPS CONNECTED TO "E" THROUGH SWITCHES AND 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

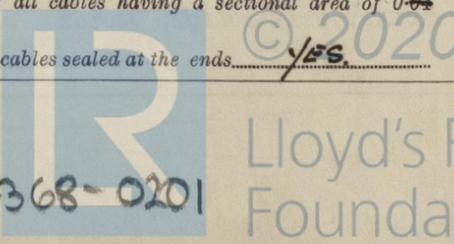
protection devices connected on the pole opposite to the equaliser connection.....-....., have they been tested under working conditions, and at what current

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.....66V....., 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.....



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with insulating compound or waterproof insulating tape. **YES**. Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage. **YES**, are cables laid under machines or floorplates. **YES**, if so, are they adequately protected. Are cables in machinery spaces, galleys, laundries, etc., lead covered. **YES** or run in conduit. State how the cables are supported and protected. **LEAD COVERED, ARMOURED AND BRAIDED CABLES CLIPPED TO TRAY PLATES. MAIN ENGINES AND BOILER ROOM IN PYROTEMAX. LEAD COVERED CABLES CLIPPED TO WOOD GROUNDS IN ACCOMMODATION.**

Are all lead sheaths, armouring and conduits effectually bonded and earthed. **YES**. Refrigerated chambers, are the cables and fittings as per Rule. Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands. **YES**, where unarmoured cables pass through beams, etc., are the holes effectually bushed. **YES** and with what material. **LEAD**. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule. **YES**. Emergency Supply, state position. **INSIDE** and method of control.

Navigation Lamps, are they separately wired. **YES**, controlled by separate double pole switches. **YES**, and fuses. **YES**. Are the switches and fuses in a position accessible only to the officers on watch. **YES**, is an automatic indicator fitted. **YES**. Secondary Batteries, are they constructed and fitted as per Rule. **YES**, are they adequately ventilated what is the battery capacity in ampere hours. **YES**.

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weather proof. **YES**. Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present. **YES**, if so, how are they protected. **FLAME PROOF IN CENTRECABIN AND ON DECK. IN WELDED STEEL BOXES IN PUMP ROOM.**

and where are the controlling switches fitted. **IN MIDSHIP ACCOM. ALLEYWAY**, are all fittings suitably ventilated. **YES**, are all fittings and accessories constructed and installed as per Rule. **YES**. Searchlight Lamps, No. of **—**, whether fixed or portable. **—**, are their fittings as per Rule. **—**. Heating and Cooking, is the general construction as per Rule. **—**, are the frames effectually earthed. **—**, are heaters in the accommodation of the convection type. **—**. Motors, are all motors constructed and installed as per Rule. **YES**, and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil. **YES**, if situated near unprotected combustible material state minimum distance from same horizontally. **—** and vertically. **—**. Are motors coupled to oil fuel transfer and unit pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment. **—**

Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing. **—**. Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rule. **—**. Control Gear and Resistances, are they constructed and fitted as per Rule. **YES**. Lightning Conductors, where required are they fitted as per Rule. **—**. Ships carrying Oil having a Flash Point less than 150° F., have all the special requirements of the Rules for such ships been complied with. **YES**, are all fuses of the cartridge type. **YES**, are they of an approved type. **YES**. Are the fittings for pump rooms, tween deck spaces, etc., in accordance with the special requirements for such ships. **YES**. Are the cables lead covered as per Rule. **YES**. Spare Gear, if the vessel is for open sea service have spares been provided as per Rule. **YES**, are they suitably stored in dry situations. **YES**. Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory. **YES**.

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.	Fuel Used.	Flash Point of Fuel.
MAIN	2	25	110	228	645	STEAM ENGINE.	
EMERGENCY							
ROTARY TRANSFORMER							

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.	Rule.			
MAIN GENERATOR	2 x 25	1	37/072	228	246	1136	V.C.	L.C.A.+B.
" " EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	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.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS ...							
No.1 AUX SWITCHBOARD MIDSHIPS	1	19/073	40	191	510	V.C.	L.C.A.+B.
No.2 " WHEELHOUSE	1	7/064	10	75	96	V.C.	"
No.3 " AFT ACCOM.	1	19/064	42	135	108	V.C.	"
No.4 " ENGINE ROOM.	1	7/064	40	75	110	V.C.	"

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	7/029	6	11.2	250	V.I.R.	L.C.
NAVIGATION LIGHTS	1	7/064	6	10	120	V.I.R.	"
LIGHTING AND HEATING	ALTERNATE SUPPLY FROM NO.1 AUX SWITCHBOARD MIDSHIPS.						
NAVIGATING BRIDGE LIGHTING DIS. FUSE BD.	1	7/044	21	31	92	V.I.R.	L.C.
MIDSHIP ACCOM. PORT	1	7/036	19.8	24	60	V.I.R.	"
" " STBD	1	7/036	20	24	66	V.I.R.	"
CREWS ACCOM. PORT	1	7/052	26	34	68	V.I.R.	"
" " STBD	1	7/052	35	34	172	V.I.R.	"
CARGO AFT	1	7/064	4.3	10	60	V.I.R.	"
ENGINE ROOM.	1	7/044	25	31	100	V.I.R.	"
" " " "	1	7/044	25	31	100	V.I.R.	"
CARGO. FWD	1	7/044	14	31	26	V.I.R.	"
SHORE CONNECTION	1	37/072		246	165	V.C.	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	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.	Rule.			
VENT FAN MIDSHIPS	1	3	1	7/036	20.4	24	120	V.I.R.	L.C.
" " AFT	1	3	1	7/044	20.4	31	122	V.I.R.	"
" " ENGINE ROOM P	1	4	1	7/052	24	34	120	V.I.R.	"
" " " S	1	4	1	7/052	24	34	60	V.I.R.	"

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.

F. PRO THE SUNDERLAND ELECTRIC & ENGINEERING CO. LTD

Electrical Engineers.

Date 13. 8. 46

COMPASSES.

Minimum distance between electric generators or motors and standard compass 40 FEET

Minimum distance between electric generators or motors and steering compass 35 FEET

The nearest cables to the compasses are as follows:—

A cable carrying 14 Ampères INSIDE feet from standard compass feet from steering compass.

A cable carrying 14 Ampères feet from standard compass INSIDE 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.

FOR AND ON BEHALF OF  
W. PHILLIPS & SONS LIMITED,

Builder's Signature.

Date 13<sup>th</sup> August 46

Is this installation a duplicate of a previous case YES. If so, state name of vessel GALEOMMA.

Plans. Are approved plans forwarded herewith. If not, state date of approval.

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

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 in conformity with the Society's Rules and Regulations, and the arrangements are in accordance with, or equivalent to those shown on the approved plans.

Materials used are of good quality, and the workmanship is satisfactory.

On completion, the insulation resistance of all circuits was good and the Generators operated on Load and Governor tests, with satisfactory results.

The Equipment as installed is, in my opinion, suitable for a blessed vessel.

W. Phillips 18. 8. 46

Total Capacity of Generators 60 Kilowatts.

The amount of Fee ... £ 24 : 10 : 14 AUG 1946

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

Committee's Minute FRI. 23 AUG 1946

Assigned Su F.E. machy. rpt.



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