

FEB 17 1938

Rpt. 13.

No. 95945

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report

16

When handed in at Local Office

16 FEB 1938

Port of NEWCASTLE-ON-TYNE

No. in Survey held at
Reg. Book. *Supp.**Newcastle.*

Date, First Survey

23/12/37

Last Survey

*4 Feb**1938.*(Number of Visits *6*)

40350 on the

*S. S. "Dasso."*Tons { Gross *1586*
Net *768.*Built at *Newcastle.*By whom built *Swan Hunter W & R Ld.*Yard No. *1580*When built *1938*

Owners

Port belonging to

Electric Light Installation fitted by *Swan Hunter Wigham Richardson Ltd.* Contract No. *1580* When fitted *1938*

Is the Vessel fitted for carrying Petroleum in bulk

Yes

System of Distribution

Double wire

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 *Yes*Generators, do they comply with the requirements regarding temperature rise *Yes*, are they compound wound *Yes*are they over compounded 5 per cent. *Yes*, 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 *Yes*

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

approved *Yes (1 in 20)* Have machines over 100 kw. been inspected by the Surveyors during manufacture and testingAre all terminals accessible, clearly marked, and furnished with sockets *Yes*

are they so spaced or shielded that they cannot be accidentally earthed,

short circuited, or touched *Yes*Are the lubricating arrangements of the generators as per Rule *Yes*

Position of Generators

Engine room starboard side

is the ventilation

in way of the generators satisfactory *Yes*are they clear of all inflammable material *Yes*

if situated near unprotected

woodwork or other combustible material, state distance of same horizontally from or vertically above the generators

are the generators protected from mechanical injury and damage from water, steam or oil *Yes*are their axes of rotation fore and aft *Yes*Earthing, are the bedplates and frames of the generating plant efficiently earthed *Yes*

are the prime movers and their respective generators

in metallic contact *Yes*

Main Switch Boards, where placed

Engine room starboard side.

If 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 *Yes*

are they protected from mechanical

injury and damage from water, steam or oil *Yes*

if situated near unprotected woodwork or other combustible material, state distance of same

horizontally from or vertically above the switchboards

and

are they constructed wholly of durable, non-ignitable non-absorbent

materials *Yes*is all insulation of high dielectric strength and of permanently high insulation resistance *Yes*is it of an approved type *Yes*

if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micaite or other

non-hygroscopic insulating material, and the slab similarly insulated from its framework *Yes*

is the non-hygroscopic insulating material of an approved

type *Yes*, and is the frame effectively earthed *Yes*

Are the fittings as per Rule regarding:— spacing or shielding of live parts

Yes, accessibility of all parts *Yes*absence of fuses on back of board *Yes*

temperature rise of

omnibus bars *Yes*individual fuses to voltmeter, pilot or earth lamp *Yes*

are moving parts of switches alive in the

"off" position *no*are all screws and nuts securing connections effectively locked *Yes*

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

D. P. switch + D. P. fuses for generator & 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

ammeters

voltmeters

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

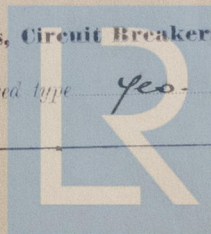
Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system

E lamps coupled to E through switches fuses.

Switches, Circuit Breakers and Fusible Cut-outs.

do these comply with the requirements of the Rules *Yes*are the fusible cutouts of an approved type *Yes*

have the reversed



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current protection devices been tested under working conditions

Joint Boxes, Section and Distribution Boards, is the

construction, protection, insulation, material, and position of these as per rule YesCables: Single, twin, concentric, or multicore single are the cables insulated and protected as per Tables IV, V, X or XI of the Rules Yes

If the cables are insulated otherwise than as per Rule, are they of an approved type

Fall of Pressure, state maximum between bus bars and

any point of the installation under maximum load 4.5 volts

Cable Sockets, are the ends of all cables having a sectional

area of 0.04 square inch and above provided with soldering sockets Yes

Paper Insulated and Varnished Cambric Insulated Cables.

If conductors are paper or varnished cambric insulated, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with

insulating compound Yes, or waterproof insulating tape

Cable Runs, are the cables fixed as far as possible in accessible positions

not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical

damage Yes Are cables in machinery spaces, galleys, laundries, bathrooms and lavatories lead covered or run in conduit YesSupport and Protection of Cables, state how the cables are supported and protected L.C. & A. in machinery spaces, L.C. inacc., clipped to the structure V.I.R. in pipe in cargo spaces

If cables are run in wood casings, are the casings and caps secured by screws

are the cap screws of brass

are the cables run in

separate grooves Yes If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII Yes

Refrigerated Chambers, are the cables and fittings in accordance with the special requirements

Joints in Cables, state if any, and how made, insulated, and protected none made

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands

Yes Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are theholes efficiently bushed Yes state the material of which the bushes are made lead

Earthing Connections, state what earthing connections are fitted and their respective sectional areas

are their connections made as per Rule

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule Yes

Emergency Supply, state

position and method of control of the emergency supply and how the generator is driven

Navigation Lamps, are these separately wired Yes, controlled by separate switch and separate fuses Yes, are the fuses double pole Yesare the switches and fuses grouped in a position accessible only to the officers on watch Yeshas each navigation lamp an automatic indicator as per Rule Yes Secondary Batteries, are they constructed and fitted as per RuleFittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight Yes

are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected

how are the cables led

where are the controlling switches situated

are all fittings suitably ventilated Yes, are all switches and lampholders constructed wholly of non-ignitable, non-absorbent materials Yes

Heating and Cooking Appliances, are they constructed and fitted as per Rule

are air heaters constructed and fitted as per Rule

Searchlight Lamps, No. of

are their fittings as per Rule

Arc Lamps, other than searchlight lamps, No. of

are their fittings as per Rule

Motors, are their working parts readily accessible Yes, are the coils self-contained and readily removable for replacement Yesare the brushes, brush holders, terminals and lubricating arrangements as per Rule Yes, are the motors placed in well-ventilated compartments in whichinflammable gases cannot accumulate and clear of all inflammable material Yes, are they protected from mechanical injury and damage fromwater, steam or oil Yes are their axes of rotation fore and aft Yes, if situated near unprotected woodwork or other combustible

material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type

if not of this type, state distance of the combustible material horizontally or vertically above the motors

and

have machines of over 100 BHP been inspected by the Surveyors during manufacture and testing

Control Gear and Resistances, are the generator

field and motor speed regulators, starters and controllers constructed and fitted as per Rule Yes Lightning Conductors, where lightning conductors

are required, are these fitted as per Rule

Ships carrying Oil having a Flash Point less than 150° F. Have the special requirements of

the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and

fittings

are all fuses of the fitted cartridge type

are they of an approved type

If portable lamps for use in dangerous spaces are supplied, are they of a self-contained, battery-fed type approved by the Home Office

Spare Gear, if the vessel is for open sea service have spares been supplied as per Rule Yes

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	1	10	110	91	600	Steam Engine		
AUXILIARY								
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
MAIN GENERATOR	1	.075	19	.072	91	97	25	V.I.R.	L.C. & A.
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER									
ENGINE ROOM									
BOILER ROOM	1	.01	7	.044	20	31	20	50	50
AUXILIARY SWITCHBOARDS									
ACCOMMODATION									
Midships stateroom	1	.0225	7	.064	37.5	46	80	50	50
Crews aft	1	.0045	7	.029	9	18	260	50	in galv pipe
WIRELESS	1	.01	7	.044	15	31	180	50	L.C.
SEARCHLIGHT									
MASTHEAD LIGHT	1	.002	3	.029	.36	7.8	240	50	in galv pipe
SIDE LIGHTS	1	.002	3	.029	.36	7.8	60	50	L.C.
COMPASS LIGHTS	1	.002	3	.029	.09	7.8	50	50	L.C.
STEER LIGHTS	1	.002	3	.029	.36	7.8	400	50	in galv pipe
CARGO LIGHTS	1	.01	7	.044	16	31	80	50	L.C. & A.
ARC LAMPS									
HEATERS									

MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP										
MAIN BILGE LINE PUMPS										
GENERAL SERVICE PUMP										
EMERGENCY BILGE PUMP										
SANITARY PUMP										
CIRC. SEA WATER PUMPS										
CIRC. FRESH WATER PUMPS										
AIR COMPRESSOR										
FRESH WATER PUMP										
ENGINE TURNING GEAR										
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS										
OIL FUEL TRANSFER PUMP										
WINDLASS										
WINCHES, FORWARD										
WINCHES, AFT										
STEERING GEAR—										
(a) MOTOR GENERATOR										
(b) MAIN MOTOR										
WORKSHOP MOTOR										
VENTILATING FANS										
Refng motor	1	1	.0045	7	.029	11	18	30	V.I.R.	L.C. & A.
" Water pump	1	1	.0045	7	.029	7.0	18	140	50	50
" Cooler fan	1	1	.002	3	.029	2.5	7.8	30	50	50
Drilling machine	1	1	.0045	7	.029	7	18	40	50	50

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.

FOR
SWAN, HUNTER, & WIGHAM RICHARDSON, LTD.

Electrical Engineers.

Date 4 Feb 1938.

COMPASSES.

Distance between electric generators or motors and standard compass 70 feet.

Distance between electric generators or motors and steering compass 60 feet.

The nearest cables to the compasses are as follows:—

A cable carrying .04 Ampères on the feet from standard compass 6 feet from steering compass.

A cable carrying .04 Ampères 6 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. To be filled in after adjustment of compasses.

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 all course in the case of the standard

compass, and nil degrees on all course in the case of the steering compass.

FOR
SWAN, HUNTER, & WIGHAM RICHARDSON, LTD.

W. S. Morrison
DIRECTOR.

Builder's Signature.

Date 5 Feb 1938.

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

General Remarks (State quality of workmanship, opinions as to class, &c. The above instⁿ has been fitted out under special survey. The materials used & workmanship are good. The insulation resistance is good. The dynamo, governor, main board fuses cables & fittings were examined & tested under working conditions & found satisfactory.

Noted.

W. T. Badger

19-2-38

Total Capacity of Generators 10 Kilowatts.

The amount of Fee ... £ 10 : 0 : 16 FEB 1938

Travelling Expenses (if any) £ : : 25/2 19 38

Committee's Minute

Assigned See other F.E. report

W. T. Badger

Surveyor to Lloyd's Register of Shipping.

TUE. 22 FEB 1938



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