

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) DEC 30 1939
Received at London Office.....

Date of writing Report 19th Dec, 1939 When handed in at Local Office 28 DEC 1939 Port of Sunderland
 No. in Survey held at Sunderland Date, First Survey 17th Nov Last Survey 18th Dec, 1939
 Reg. Book. Suppl. (Number of Visits..... 6)
40811 on the M.V. "RODSLEY" Tons {Gross... 5000
 Net... 3014
 Built at Sunderland By whom built Wm Douglas & Co, Ltd. Yard No. 654 When built 1939
 Owners Thomson Shipping Co. Ltd. Port belonging to Kewville
 Electrical Installation fitted by The Sunderland Frigate Coy. Ltd. Contract No. 654 When fitted 1939
 Is vessel fitted for carrying Petroleum in bulk no Is vessel equipped with D.F. no E.S.D. no Gy.C. no Sub.Sig. no

Have plans been submitted and approved no System of Distribution simple wire Voltage of supply for Lighting 110
 Heating no Power 110 Direct no Alternating Current, Lighting no Power no If Alternating Current state frequency no Prime Movers,
 has the governing been tested and found efficient when the whole load is suddenly thrown on and off no Are turbine emergency governors fitted with a
 trip switch as per Rule no Generators, are they compound wound no, are they level compounded under working conditions no,
 if not compound wound state distance between generators no and from switchboard no Where more than one generator is fitted are they
 arranged to run in parallel no, are shunt field regulators provided no 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 no Have certificates of
 test for machines under 100 kw. been supplied no and the results found as per rule no Are the lubricating arrangements and the construction
 of the generators as per rule no Position of Generators Engine room starboard side at
forward end, is the ventilation in way of generators satisfactory no are they clear of inflammable material no, if situated
 near unprotected combustible material state distance from same horizontally no and vertically no, are the generators protected from mechanical
 injury and damage from water, steam and oil no, are the bedplates and frames earthed no and the prime movers and generators in metallic
 contact no Switchboards, where are main switchboards placed Engine room starboard side on
forward bulkhead near generators
 are they in accessible positions, free from inflammable gases and acid fumes no, are they protected from mechanical injury and damage from water, steam
 and oil no, if situated near unprotected combustible material state distance from same horizontally no and vertically no, what insulation
 material is used for the panels slate, if of synthetic insulating material is it an Approved Type no, if of
 semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule no Is the frame effectually earthed no
 Is the construction as per Rule no, including accessibility of parts no, absence of fuses on the back of the board no, individual fuses
 to pilot and earth lamps, voltmeters, etc., no locking of screws and nuts no, labelling of apparatus and fuses no, fuses on the "dead"
 side of switches no Description of Main Switchgear for each generator and arrangement of equaliser switches simple pole
Knife switch and fuse on each pole
 and for each outgoing circuit simple pole double throw knife switch and fuse
on each pole
 Are compartments containing switchboards composed of fire-resisting material or lined as per Rule no Instruments on main switchboard 2w
 ammeters One voltmeters no synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the
 equaliser connection no Earth Testing, state means provided 2 lamps coupled G.S. through one phase

Switches, Circuit Breakers and Fuses, are they as per Rule Y, are the fuses an approved type Y, are all fuses labelled as per Rule Y, are the reversed current protection devices connected on the pole opposite to the equaliser connection Y, have they been tested under working conditions Y. Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule Y.

Cables, are they insulated and protected as per the appropriate Tables of the Rules Y, if otherwise than as per Rule are they of an approved type Y, state maximum fall of pressure between bus bars and any point under maximum load less than 5.5 lbs/sq. in., are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets Y. Are paper insulated and varnished cambric insulated cables sealed at the exposed ends Y with insulating compound Y or waterproof insulating tape Y. 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 Y, are cables laid under machines or floorplates no, if so, are they adequately protected Y. Are cables in machinery spaces, galleys, laundries, etc., lead covered Y or run in conduit Y. State how the cables are supported and protected V.I.R. cables run in covered galvanized pipe in 'foremast' and in machinery spaces; L.C. cables clipped to wood grounds or to surface in accommodation. Are all lead sheaths, armouring and conduits effectually bonded and earthed Y. Refrigerated chambers, are the cables and fittings as per Rule Y. Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands Y, where unarmoured cables pass through beams, etc., are the holes effectually bushed Y and with what material lead and fibre. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Y. Emergency Supply, state position Y and method of control Y.

Navigation Lamps, are they separately wired Y controlled by separate single pole switches Y 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 Y, are they adequately ventilated Y. 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 no, if so, how are they protected Y and where are the controlling switches fitted Y, are all fittings suitably ventilated Y. are all fittings and accessories constructed and installed as per Rule Y. Searchlight Lamps, No. of Y, whether fixed or portable Y, are their fittings as per Rule Y. Heating and Cooking, is the general construction as per Rule Y. are the frames effectually earthed Y, are heaters in the accommodation of the convection type Y. Motors, are all motors constructed and installed as per Rule Y and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil Y, if situated near unprotected combustible material state minimum distance from same horizontally Y and vertically Y. Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing Y. Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rule Y. Control Gear and Resistances, are they constructed and fitted as per Rule Y. Lightning Conductors, where required are they fitted as per Rule Y. 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 Y, are all fuses of the cartridge type Y are they of an approved type Y. If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flameproof type Y. Spare Gear, if the vessel is for open sea service have spares been provided as per Rule Y, are they suitably stored in dry situations Y. Insulation Tests, has the insulation resistance of all circuits and apparatus been megger tested and found satisfactory Y.

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ...	2	15	110	136.5	340	Single cylinder		
						Steam engines		
EMERGENCY ...								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (load 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 GENERATORS ...	2 x 15	1	19/072	136.5	157	96 x 104	V.C.	L.C.
" " EQUALISER ...								
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR ...								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (load plus return feet).	INSULATED WITH.	HOW PROTECTED.
AUX. SWITCHBOARDS AND SECTION BOARDS ...						

LIGHTING AND HEATING, ETC., CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (load plus return feet).	INSULATED WITH.	HOW PROTECTED.
WIRELESS ...		1	7/024	15	31	150 V.I.R. In pipe & L.C.
NAVIGATION LIGHTS ...		1	4/024	10	12.9	30 V.I.R. L.C.
LIGHTING AND HEATING ...						
Laboratory & Engineer's Htg. DB.		1	7/024	12.18	31	140 x 80 V.I.R. In pipe
Crew Mess Htg. DB.		1	7/029	7.2	18.2	360 V.I.R. In pipe
Engine Room Htg. DB.		1	7/029	12.7	18.2	100 V.I.R. In pipe

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (load plus return feet).	INSULATED WITH.	HOW PROTECTED.
Oil Separator	2	2	1	7/024	18.5	31	130 V.I.R. In pipe
Oil Burning Fan	1	5	1	7/064	41	46	220 V.I.R. In pipe
Pressing Pump	1	1.5	1	7/029	13.5	18.2	180 V.I.R. In pipe
Refrig. Machine	2	2.1	1	7/024	7.29	31	140 V.I.R. In pipe
E.R. Crane	1	2	1	7/029	19	18.2	120 V.I.R. In pipe
Workshop Hoist	1	2	1	7/029	17.8	18.2	260 V.I.R. In pipe

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.

H. W. Sunderland Forge and Foundry Electrical Engineers. Date *21-12-1939*
H. J. Gurney

COMPASSES.

Minimum distance between electric generators or motors and standard compass *59 feet*

Minimum distance between electric generators or motors and steering compass *52 feet*

The nearest cables to the compasses are as follows:—

A cable carrying *.14* Ampères *on the* feet from standard compass *7* feet from steering compass.

A cable carrying *.14* Ampères *7* 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 *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.

WILLIAM DOXFORD & SONS, Limited.

H. Murray Bell Director. Builder's Signature. Date *27.12.39*

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, regulation and compensating of the generating sets were tested, the insulation resistances of all circuits were measured and the open gear was checked. The electrical equipment is in my opinion suitable for a closed vessel.*

W. J. H.
4/1/40.

Total Capacity of Generators *32* Kilowatts.

The amount of Fee ... £ *22 : 10* : When applied for, *27 DEC 1939*

Travelling Expenses (if any) £ : : When received, *1/1/40*

B. J. H.
Surveyor to Lloyd's Register of Shipping.

FRI. 12 JAN 1940

Committee's Minute

Assigned *See A/c. No. 32769*

2m. 10. 38.—Transfer. (MADE IN ENGLAND.)
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

