

FERM
Mar 22/11

Rpt. 13.

No. 13411

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

23 JAN 1943

Received at London Office.....

Date of writing Report... 1. 1. 1943 When handed in at Local Office... 15. 1. 1943 Port of... Belfast

No. in Survey held at... Belfast Date, First Survey... 18 Spt 1942 Last Survey... 31st Dec 1942
Reg. Book. (Number of Visits... 21...)

on the... M. V. "San Veronica" Tons { Gross 5158.97
Net 4787.60

Built at... Belfast By whom built... Harland & Wolff Ltd. Yard No... 1090 When built... 1941/2

Owners... Eagle Oil & Shipping Co. Port belonging to... London.

Electrical Installation fitted by... Harland & Wolff Ltd. Contract No... 1090 When fitted... 1941/2

Is vessel fitted for carrying Petroleum in bulk... yes 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... two wire system 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... 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... none 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... starboard side of Motor Room, floor level.

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... starboard side of Motor Room floor level

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... sundanys, 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

one 250 amp. double pole overload circuit breaker with time lags.

and for each outgoing circuit... one double pole quick-break knife type C.O. switch with

fuses on each pole

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 with D.F. quick break C.O. switch

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... 350, are the reversed current

protection devices connected on the pole opposite to the equaliser connection... none, 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... yes,

state maximum fall of pressure between bus bars and any point under maximum load... 3.96, 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... none

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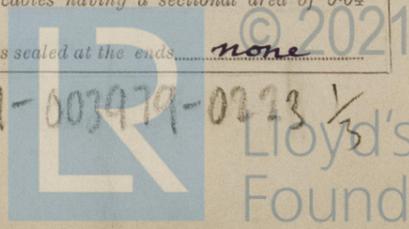
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with insulating compound..... or waterproof insulating tape..... Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage. yes, are cables laid under machines or floorplates. no, 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. L.S.A.B. cables run in hardwood cleats along fore and aft gangway - Motor R^m branch wiring single L.S.A.B. cable carried on perforated plating or clipped to bulkheads - Bridge and accom^m L.C. cable brass clipped to bulkheads.

Are all lead sheaths, armouring and conduits effectually bonded and earthed. yes. Refrigerated chambers, are the cables and fittings as per Rule. yes

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 effectively bushed. yes and with what material. sheet lead

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule..... Emergency Supply, state position..... 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....., are they adequately ventilated..... what is the battery capacity in ampere hours.....

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof. 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. flameproof fittings in pump rooms.

and where are the controlling switches fitted. midship accommodation., 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. yes

Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing. none Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rule. yes Control Gear and Resistances, are they constructed and fitted as per Rule. yes Lightning Conductors, where required are they fitted as per Rule. yes 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				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	1	25	110	227	685	Steam Engine	-	-
	1	25	110	227	685	Diesel	Pool Diesel	above 150° F
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	25	1	37/103	227	240	60	RUBBER	L.S.A.B.
" " EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								



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MAIN DISTRIBUTION CABLES.

DESCRIPTION.	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.			
AUX. SWITCHBOARDS AND SECTION BOARDS ...							
FOR ² MASTERBOARD	1	37.103	150	240	520	RUBBER	L.S.A.B.
D.G. SUPPLY PANEL	2	37.072	132	152	20	"	"
SECTION BOX No 1	1	7.064	36	46	20	"	"
" " No 2	1	19.064	56	83	90	"	"
" " No 3	1	7.064	39	46	50	"	"
" " No 4	1	19.083	105	118	40	"	"
DIST. BOX M1 ENGINE RM AUX ²	1	7.044	26	31	30	"	"
" " M2 WORKSHOP & FANS	1	19.064	75	83	110	"	"

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS DUPLICATED	1	19.052	40	64	100	RUBBER	L.C.
NAVIGATION LIGHTS "	1	7.036	2	24	105	"	"
LIGHTING AND HEATING							
D.B. No 1 NAV. BRIDGE L ²	1	7.036	16	24	105	"	"
No 2 UPPER BRIDGE O ² L ²	1	7.029	7	15	40	"	"
No 3 BRIDGE O ² L ²	1	7.036	16	24	20	"	"
No 4 " " "	1	7.029	9	15	20	"	"
No 5 " " FORT. CONN.	1	7.029	6.5	15	12	"	"
No 6 FLOODLIGHTS	1	7.036	16.5	24	12	"	"
No 7 CARGO PUMP R ²	1	7.029	4.4	15	12	"	"
No 8 POOP O ² L ²	1	7.036	15	24	120	"	"
No 9 " " "	1	"	17.4	"	60	"	"
No 10 " " FORT. CONN.	1	7.029	6	15	140	"	"
No 11 FORECASTLE L ²	1	7.044	4.5	31	400	"	L.S.A.B.
No 12 UPPER O ² AFT L ²	1	7.029	9.7	15	10	"	L.C.
No 13 " " "	1	"	9.2	"	60	"	"
SECT. BOX No 1A (ALT. SUPPLY TO W.T. & NAV)	1	19.083	42	118	580	"	L.S.A.B.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
OIL PURIFIER MOTOR	1	2	1	7.036	16	24	20	RUBBER	L.S.A.B.
STAND-BY F.O. PUMP	1	1.25	1	7.029	10	15	"	"	"
DOMESTIC F.W. "	2	0.75	1	3.036	5	10	100	"	L.C.
TURNING MOTOR	1	10	1	19.064	80	83	90	"	L.S.A.B.
VENT FAN "	1	3	1	7.044	25	31	30	"	L.C.
" " No 1	1	1.5	1	7.029	13	15	90	"	L.S.A.B.
" " No 2	1	4	1	7.052	34	37	80	"	"
DRILL MOTOR	1	3	1	7.044	25	31	30	"	"
LATHE "	1	2	1	7.036	16	24	40	"	"
GRINDER "	1	2	1	"	"	"	"	"	"
OIL BURNING PUMP MOTOR	1	0.25	1	3.036	2	10	120	"	"
GALLEY RANGE BLOWER "	1	0.75	1	"	5	10	70	"	L.C.

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS

DUPLICATED.

WIRELESS	DUPLICATED.								
S. & F. BOX N ^o 14	ENGINE RM ^s LT ^s	1	71.044	21	31 ✓	110	RUBBER	L.S.A.B.	
" " N ^o 15	" " "	1	71.036	10	24 ✓	160	"	"	
" " N ^o 16	" " "	1	71.029	5.2	15 ✓	12	"	"	
" " N ^o 17	" " "	1	"	7.9	"	12	"	"	

N^o 7 CARGO PUMP RM^s

1 71.029 4.4 15 ✓ 12 " "

N^o 8 FOOD PK LT^s

1 71.036 15 24 ✓ 120 " "

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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.



Electrical Engineers. Date 1.1.43

COMPASSES.

Minimum distance between electric generators or motors and standard compass 44 feet

Minimum distance between electric generators or motors and steering compass 40 feet

The nearest cables to the compasses are as follows:—

A cable carrying 2.1 Ampères 7 feet from standard compass 4 feet from steering compass.

A cable carrying 0.14 Ampères ~~5m~~ feet from standard compass 4 feet from steering compass.

A cable carrying 0.14 Ampères 10 feet from standard compass ~~m~~ feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power Yes, and calibrated with D.C. on & off.

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



Builder's Signature. Date 1.1.43.

Is this installation a duplicate of a previous case no If so, state name of vessel /

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

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 fitted on board under special survey and in accordance with the plans. The installation has been tested under full working conditions and found satisfactory. The materials and workmanship are good.

Total Capacity of Generators 50 Kilowatts.

The amount of Fee ...	£ 27: 10:	When applied for, not yet received, 19.....
Due Liverpool £ 13.15.0		
Due Belfast £ 13.15.0		
Travelling Expenses (if any) £	:	When received, 19.....

S. H. Jones
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 5 FEB 1943

Assigned See Bel. 26, 13411

5m.430.—Transfer. (MADE AND PRINTED IN ENGLAND.)
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

