

Rpt. 13.

No. 21467

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 31st Aug^t 1945 When handed in at Local Office 2nd Sept^r 1945 Port of Leith
 No. in Survey held at Burntisland Date, First Survey 25-5-45 Last Survey 24th Aug^t 1945
 Reg. Book. 23498 on the S.S. "EMPIRE PACIFIC." Tons { Gross... 987
 Net... 380
 Built at Burntisland By whom built Burntisland J. B. Loh Yard No. 298 When built 1945
 Owners Ministry of War Transport Port belonging to Burntisland
 Electrical Installation fitted by Burntisland J. B. Loh Contract No 298 When fitted 1945
 Is vessel fitted for carrying Petroleum in bulk no Is vessel equipped with D.F. - E.S.D. - Gy.C. - Sub.Sig. -

Have plans been submitted and approved yes System of Distribution Double wire Voltage of supply for Lighting 110
 Heating 110 Power 110 Direct or Alternating Current, Lighting Direct Power Direct 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 in engine room
-, 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 near generator
-
 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 simdanyo, 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 yes 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 -
150 Amp double pole switches & fuses.
-
 and for each outgoing circuit 30 amp double pole, double throw switches & D.P. fuses.
-
 Are compartments containing switchboards composed of fire-resisting material or lined as per Rule yes Instruments on main switchboard 3
 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 lamps
 Switches, Circuit Breakers and Fuses, are they as per Rule -, 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 yes/WF
 state maximum fall of pressure between bus bars and any point under maximum load 4.2, 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

with insulating compound Yes 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. No, 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. Yes. State how the cables are supported and protected. Lead covered, armoured + braided cable supported by galvanised clips & protected by sheet iron plating. Where lead covered supported by brass saddles to wood grounds + 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 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. - 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. No, if so, how are they protected. -

and where are the controlling switches fitted. -, 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. Yes. 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. -. 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	ONE	15	110	136	550	Steam Engine		
	ONE	15	110	136	550	do		
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 N° 1.	15	1	19.064	78	135	30.	V.C.	LEAD SHEATHED.
" " EQUALISER								
" " N° 2.	15	1	19.064	78	135	30.	V.C.	LEAD SHEATHED.
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							

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	7.044	10	31	380	V.I.P.	L.S. & S.W.A.
NAVIGATION LIGHTS	1	7.044	5	31	360	V.I.P.	L.S. & S.W.A.
LIGHTING AND HEATING							
MIDSHIP ACCOMMODATION.	1	7.044	24	31	280	V.I.P.	L.S. & S.W.A.
AFT ACCOMMODATION	1	7.044	18	31	80	V.I.P.	L.S. & S.W.A.
CARGO LIGHTING	1	7.044	20	31	280	V.I.P.	L.S. & S.W.A.
ENGINE ROOM LIGHTING.	1	7.044	22	31	40	V.I.P.	L.S. & S.W.A.
VENTILATION D.F.B.	1	19.044	56.6	87	90	V.C.	L.S. & S.W.A.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
REFRIGERATOR.	1	2	1	7.036	18	24	20	V.I.P. L.S. & S.W.A.
AFT ACCOM VENT FANS	2	1	1	7.029	10	15	30	V.I.P. L.S. & S.W.A.
MIDSHIP ACCOM VENT FANS	2	3/4	1	7.029	8	15	250	V.I.P. L.S. & S.W.A.
ENGINE ROOM VENT FANS	2	1.6	1	7.036	15	24	20	V.I.P. L.S. & S.W.A.
GALLEY VENT FANS (EXH)	2	.08	1	3.029	.6	5	30	V.I.P. L.S. & S.W.A.
ENGINE ROOM VENT FAN (EXH)	1	.4	1	3.029	5	5	25	V.I.P. L.S. & S.W.A.

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.

FOR THE BURNTBLEND SHIPBUILDING COMPANY LTD.

J. Leane DIRECTOR Electrical Engineers. Date 31/8/45

COMPASSES.

Minimum distance between electric generators or motors and standard compass 140 FEET.

Minimum distance between electric generators or motors and steering compass 130 FEET.

The nearest cables to the compasses are as follows:—

A cable carrying .36" Ampères 7" feet from standard compass - feet from steering compass.

A cable carrying .36 Ampères - feet from standard compass 7' 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 any course in the case of the

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

J. Leane DIRECTOR Builder's Signature. Date 31/8/45

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 13/1/45

Certificates. Are certificates of test for motors engaged on essential services and generators forwarded herewith No - See letter attached

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.) _____

This Installation has been efficiently fitted on board in accordance with the Rules & the approved plans. The materials & workmanship are sound & good, & the installation was found satisfactory under full load & working conditions.

*Noted
 19.9.45*

Total Capacity of Generators 30 Kilowatts.

The amount of Fee	£ 22: 10 :	When applied for,
+ 25% for Spec ⁿ	5: 12: 6	<u>3/9/1945</u>
Travelling Expenses (if any)	£ 28 - 2 - 6	When received,
2 1/2% £ 23-12-6	19.....
1% £ 4-10-0		

For J. F. Campbell & Self John Houston
 Surveyor to Lloyd's Register of Shipping

SEP 21 1945

Committee's Minute _____

Assigned see minute
M. H. Rpt.

5m. 4.33.—Transfer. (MADE AND PRINTED IN ENGLAND.) (The Surveyors are requested not to write on or below the space for Committee's Minute.)

