

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) 22 MAY 1948  
Received at London Office

Date of writing Report 20th APRIL 1948 When handed in at Local Office 22 APR 1948 Port of NEWCASTLE-ON-TYNE

No. in Survey held at BATH Date, First Survey 23rd MAR 1948 Last Survey 5th APRIL 1948  
Reg. Book. (Number of Visits...)

35411 on the S.S. "WATSON FERRIS" Tons { Gross 1791  
Net 1041

Built at SUPERIOR WIS. By whom built WALTER BUTLER SHIPBUILDERS INC. Yard No. - When built 1943

Owners MINISTRY OF TRANSPORT Port belonging to LONDON.

Electrical Installation fitted by WALTER BUTLER SHIPBUILDERS INC Contract No. - When fitted 1943

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 No System of Distribution TWO WIRE - INSULATED Voltage of supply for Lighting 120

Heating - Power 120 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 YES, 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 - and the results found as per rule - 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 GENERATORS

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 SINDAMPO, 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 300 & DOUBLE POLE CIRCUIT

BREAKER WITH OVERLOAD, UNDERVOLTAGE AND REVERSE CURRENT TRIPS ALSO TRIPLE POLE KNIFE SWITCH.

and for each outgoing circuit. DOUBLE POLE QUICK BREAK SWITCH WITH A FUSE 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 YES Earth Testing, state means provided EARTH LAMPS

Switches, Circuit Breakers and Fuses, are they as per Rule YES, are the fuses an approved type AMERICAN PATTERN, 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 350A, are the reversed current

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

did they operate YES 30A 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 - 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 YES. Are cables in machinery spaces, galleys, laundries, etc., lead covered YES or run in conduit -. State how the cables are supported and protected MAIN CABLES - LEAD COVERED ARMOURED CLIPPED TO "U" BRACKETS  
ACCOMMODATION CABLES - LEAD COVERED ARMOURED 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 -. 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 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 -. Control Gear and Resistances, are they constructed and fitted as per Rule YES. Lighting 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 -, are all fuses of the cartridge type - are they of an approved type -. 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 -. 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.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	2	25	120	208	400	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 For Pole.	Sectional Area of No. and Size of Conductor in sq. ins. or sq. mm.				
MAIN GENERATOR	25	1	250,000	208	40	VC	L.C.A.
" " EQUALISER		1	# 2	104	134	VC	L.C.A.
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 of No. and Size of Conductor in sq. ins. or sq. mm.				
AUX. SWITCHBOARDS AND SECTION BOARDS						

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	No. in Parallel Per Pole.	Sectional Area of No. and Size of Conductor in sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
NAVIGATION LIGHTS	1	# 4	22	70	VC	L.C.A.
LTA. PANEL NO 5	1	# 12	6.5	25	VC	L.C.A.
LIGHTING AND HEATING						
LTA. PANEL NO 6. Cargo hold + Floodlight	1	# 6	23	46	VC	L.C.A.
" " NO 1. Crew Quarters Lighting	1	# 6	7.0	46	VC	L.C.A.
" " NO 4. Wheelhouse + Outside Lights	1	# 4	52.5	70	VC	L.C.A.
" " NO 2. Engine Room Lighting	1	# 4	54	70	VC	L.C.A.
" " NO 3. Midships + Forecastle Lighting	1	# 4	40	70	VC	L.C.A.

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.	
MAIN CIRCULATING PUMP MOTOR	1	25	1	250,000	190	280	VC	L.C.A.
REFRIG. COMPRESSOR MOTOR	1	12	1	# 12	3	25	VC	L.C.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.

..... Electrical Engineers. ....

..... Date.....

**COMPASSES.**

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

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

The nearest cables to the compasses are as follows:—

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

A cable carrying ..... Ampères ..... feet from standard compass ..... 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 .....

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted .....

The maximum deviation due to electric currents was found to be ..... degrees on ..... course in the case of the standard compass, and ..... degrees on ..... course in the case of the steering compass.

..... Builder's Signature. ....

..... Date.....

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

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 .....

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

The electrical installation of this ship to the standards of the American Bureau of Shipping has been in operation for approximately 5 years and was found to be in satisfactory condition, except that no alternative supply was available for the navigation event. An alternative supply has been arranged from the porthouse D. Board.

The materials used and the workmanship are satisfactory.

In my opinion the electrical installation of this ship is in a satisfactory condition and eligible to receive the Society's Classification of L.M.C. 4. 48.

-noted

29.5.48.

Total Capacity of Generators..... 50 ..... Kilowatts.

INCLUSIVE FEE SEE LONDON  
 ENDORSEMENT DATED 28-1-48.

The amount of Fee ... .. £	:	:	When applied for,
LICENCE SUPERVISION	:	:	.....19.....
Travelling Expenses (if any) £	:	:	When received.
	:	:	.....19.....

..... Surveyor to Lloyd's Register of Shipping.

Committee's Minute ..... FRI. 4 JUN 1940 .....

Assigned..... See F.E. Mchly. rpt. ....

5m. 4. 30.—Transfer. (MADE AND PRINTED IN ENGLAND.)  
 (The Surveyors are requested not to write on or below the space for Committee's Minutes.)



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