

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 1 FEB 1944 When handed in at Local Office 1 FEB 1944 Received at London Office 28 FEB 1944

No. in Survey held at NEWCASTLE-ON-TYNE Date, First Survey 6/9/1943 Last Survey 25-1-1944  
Reg. Book. (Number of Visits 8)

on the S/S "UMTATA" Tons 7288 Gross 3799 Net

Built at WALKER-ON-TYNE By whom built SWAN HUNTER & WILKINSON Yard No. 1440 When built 1944

Owners BULLARD KING & CO LTD Port belonging to LONDON

Electrical Installation fitted by CAMPBELL & ISHERWOOD LTD Contract No. 1440 When fitted 1944

Is vessel fitted for carrying Petroleum in bulk — Is vessel equipped with D.F. YES E.S.D. — Gy.C. YES Sub.Sig. —

Have plans been submitted and approved YES System of Distribution TWO WIRE INSULATED Voltage of supply for Lighting 220

Heating — Power 220 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 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 ENGINE ROOM. PORT IN AND OUT BOARD. NEAR AFT

BULKHEAD 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 ENGINE ROOM PORT IN DYNAMO ROOM.

—

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 —, 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 400 AMPERE CIRCUIT

BREAKERS WITH TWO OVERLOAD TRIPS. TIME LAGS AND NO VOLT RELEASE.

—

and for each outgoing circuit DOUBLE POLE DOUBLE THROW G.B. SWITCHES AND DOUBLE POLE FUSES.

—

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 CONNECTED TO E THROUGH SWITCHES AND FUSES.

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 25%, 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 —,

state maximum fall of pressure between bus bars and any point under maximum load 444V, are the ends of all cables having a sectional area of 0.01

square inch and above provided with soldering sockets YES Are paper insulated and varnished cambric insulated cables sealed at the ends 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 ...	2	75	220	287	450	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 Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ... ..	2 x 85	1	34/103	384	385 ✓	45/48	Y.C.	L.C. & B.
" " EQUALISER ... ..								
EMERGENCY GENERATOR ... ..								
ROTARY TRANSFORMER: MOTOR ... ..								
" " GENERATOR ... ..								

### MAIN DISTRIBUTION CABLES.

[illegible]

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	...	...	...	...	...	...	1	4/052	18	34	✓	195	Y.I.R.	L.C+B.
NAVIGATION LIGHTS	...	...	...	...	...	...	1	4/036	3	24	✓	910	V.I.R.	L.C+B.
LIGHTING AND HEATING	...	...	...	...	...	...	ALTERNATE SUPPLY FROM SALOON LIGHTING DIS. BOARD.							
WHEEL HOUSE LIGHTING DIS. FUSE BOARD.	...	...	...	...	...	...	1	4/036	8	24	✓	60	Y.I.R.	L.C+B.
FORWARD	"	"	"	"	"	"	1	4/036	18	24	✓	300	V.I.R.	L.C+B.
OFFICERS ACCOM.	...	...	...	...	...	...	1	4/036	12	24	✓	12	V.I.R.	L.C+B.
"	"	"	"	"	"	"	1	4/036	14	24	✓	60	V.I.R.	L.C+B.
BOAT DECK.	"	"	"	"	"	"	1	4/036	11	24	✓	150	V.I.R.	L.C+B.
ENGINEERS ACCOM	...	...	...	...	...	...	1	4/036	9	24	✓	24	V.I.R.	L.C+B.
"	"	"	"	"	"	"	1	4/036	8	24	✓	30	V.I.R.	L.C+B.
"	"	"	"	"	"	"	1	4/036	10	24	✓	90	V.I.R.	L.C+B.
MAIN MAST	...	...	...	...	...	...	1	4/036	12	24	✓	150	V.I.R.	L.C+B.
FORE	"	"	"	"	"	"	1	4/036	12	24	✓	240	V.I.R.	L.C+B.
POOP DECK.	"	"	"	"	"	"	1	4/044	9.5	31	✓	30	V.I.R.	L.C+B.
AFT ACCOM.	...	...	...	...	...	...	1	4/064	9	46	✓	288	V.I.R.	L.C+B.
ENGINE ROOM.	"	"	"	"	"	"	1	4/064	24	46	✓	15	V.I.R.	L.C+B.

## MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.		No.	B.H.P.								
COOLER FAN MOTOR	No1	1	6.75	1	4/044	24	31	✓	120	V.I.R.	LC4B
"	No2	1	11	1	4/064	44	46	✓	120	V.I.R.	LC4B
"	No3	1	11	1	4/064	44	46	✓	120	V.I.R.	LC4B
"	No4	1	6.75	1	4/044	24	31	✓	120	V.I.R.	LC4B
BRINE PUMP MOTOR	No1	1	6	1	4/036	24	24	✓	162	V.I.R.	LC4B
"	No2	1	6	1	4/036	24	24	✓	135	V.I.R.	LC4B
"	No3	1	6	1	4/036	24	24	✓	135	V.I.R.	LC4B
REFRIGERATOR		1	4	1	4/036	16	24	✓	135	V.I.R.	LC4B
LATHE MOTOR		1	1	1	4/036	4	24	✓	60	V.I.R.	LC4B
GRINDER MOTOR		1	1.5	1	4/036	6	24	✓	50	V.I.R.	LC4B
THERMOTANKS BOAT DECK		3	1.5	1	4/036	6	24	✓	60/100 140	V.I.R.	LC4B
THERMOTANK HFT		1	1.5	1	4/036	6	24	✓	40	V.I.R.	LC4B
ENGINE ROOM VENT FAN.		1	1.5	1	4/036	6	24	✓	50	V.I.R.	LC4B



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.

CAMPBELL & ISHERWOOD, LTD.

Electrical Engineers.

Date 18th Jan 1944

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass 30 FEET

Minimum distance between electric generators or motors and steering compass 22 FEET

The nearest cables to the compasses are as follows:—

A cable carrying 1/4 Ampères 100 feet from standard compass 100 feet from steering compass.

A cable carrying 1/4 Ampères 100 feet from standard compass 100 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.

SWAN, HUNTER & WIGHAM RICHARDSON, LTD.

Builder's Signature.

Date 25th January 1944

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 23-10-43.

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 Equipment of

this vessel was installed under special survey, in conformity with the Society's Rules and Regulations, and the arrangements are in accordance with, or equal to those shown on the approved plans.

Materials used are of good quality and the workmanship is good.

On completion, the insulation resistance of all circuits and motors was measured and found satisfactory, and the generators operated, under normal working conditions, with satisfactory results.

The Equipment, as installed, is, in my opinion, suitable for a classed vessel.

Total Capacity of Generators 140 Kilowatts.

The amount of Fee ... £ 39 : 10 : When applied for, 2 FEB 1944

Travelling Expenses (if any) £ : : When received, 19.....

A. R. Vincent.  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute THURS 9 MAR 1944

Assigned See J. E. Machy, rpl.



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Foundation