

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office. 10 AUG 1945

System of Distribution Two Wire 220 volts, Power 220 volts.

Pressure of supply for Lighting 220 volts, Heating 220 volts, Power 220 volts.

Direct or Alternating Current, Lighting Direct Current Power Direct Current

If alternating current system, state frequency of periods per second ----

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off Yes

Generators, do they comply with the requirements regarding temperature rise Yes, are they compounded wound Yes

are they over compounded 5 per cent. Yes ~~XX~~

Where more than one generator is fitted are they arranged to run in parallel Yes, is an adjustable regulating resistance fitted in series with each shunt field Yes

Have certificates of test results for machines under 100 kw. been submitted and approved Yes Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing Yes

Are all terminals accessible, clearly marked, and furnished with sockets Yes, are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched Yes Are the lubricating arrangements of the generators as per Rule Yes

Position of Generators 2-12-KW Turbo Genrs. in P&S Eng. Rooms (2-60KW. Diesel Genrs.) in Diesel Compts. is the ventilation in way of the generators satisfactory Yes are they clear of all inflammable material Yes if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators -- and --

are the generators protected from mechanical injury and damage from water, steam or oil Yes, are their axes of rotation fore and aft Yes

Earthing, are the bedplates and frames of the generating plant efficiently earthed Yes are the prime movers and their respective generators in metallic contact Yes Main Switch Boards, where placed One in Port Eng. Room & One in Stbd. Eng. Room

If the generators and main switchboard are not placed in the same compartment, is each generator provided with a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard Yes

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes Yes, are they protected from mechanical injury and damage from water, steam or oil Yes, if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards -- and --, are they constructed wholly of durable, non-ignitable non-absorbent materials Yes, is all insulation of high dielectric strength and of permanently high insulation resistance Yes

is it of an approved type Yes, if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework --, is the non-hygroscopic insulating material of an approved type ---, and is the frame effectively earthed Yes Are the fittings as per Rule regarding:—spacing or shielding of live parts Yes, accessibility of all parts Yes, absence of fuses on back of board Yes, temperature rise of omnibus bars Yes, individual fuses to voltmeter, pilot or earth lamp Yes, are moving parts of switches alive in the "off" position No are all screws and nuts securing connections effectively locked Yes are any fuses fitted on the live side of switches No

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches Circuit Breakers and Double-Pole Knife Switches fitted with Quick-Break "Splash" Switches Equaliser Switches are not fitted.

Are turbine driven generators fitted with emergency trip switch as per rule Yes Are cupboards or compartments containing switchboards composed of fire-resisting material Yes Instruments on main switchboard Two ammeters Three volt-meters -- synchronising device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection ----

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system Switches, Circuit Breakers and Fusible Cut-outs.

Switch, Fuse and Lamp Testing Device. Yes are the fusible cutouts of an approved type Yes have the reverse

do these comply with the requirements of the Rules. Yes

current protection devices been tested under working conditions. **Yes** Joint Boxes, Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule **Yes**

Cables: Single, twin, concentric, or multicore. **Single** are the cables insulated and protected as per Tables IV, V, X or XI of the Rules. **Yes**

If the cables are insulated otherwise than as per Rule, are they of an approved type **--** Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load **4-5 Volts** Cable Sockets, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets. **Yes** Paper Insulated and Varnished Cambric Insulated Cables.

If conductors are paper or varnished cambric insulated, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound. **Yes**, or waterproof insulating tape. **Yes** Cable Runs, are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage. **Yes** Are cables in machinery spaces, galleys, laundries, bathrooms and lavatories lead covered or run in conduit **Lead Covered**

Support and Protection of Cables, state how the cables are supported and protected **On Perforated Trays for Cable Main Runs Etc., In Steel Conduit Through Magazines with Metal Cases Fitted over same where Necessary.**

If cables are run in wood casings, are the casings and caps secured by screws. **--**, are the cap screws of brass. **--**, are the cables run in separate grooves. **--**. If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII. **Yes**

Refrigerated Chambers, are the cables and fittings in accordance with the special requirements. **Yes**

Joints in Cables, state if any, and how made, insulated, and protected. **No Joints in Cables**

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands. **Yes** Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed. **Yes** state the material of which the bushes are made. **Sheet Lead**

Earthing Connections, state what earthing connections are fitted and their respective sectional areas. **All Cables are of the Lead Cased Variety, and are clipped direct to the Hull throughout.**

are their connections made as per Rule. **Yes**

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule. **Yes** Emergency Supply, state position and method of control of the emergency supply. **Comprehensive System of Emergency**

Bulkhead Terminals and Cabling for all vital Services throughout the Vessel, Usual Admiralty Practise

Navigation Lamps, are these separately wired. **Yes**, controlled by separate switch and separate fuses. **Yes**, are the fuses double pole. **Yes**, are the switches and fuses grouped in a position accessible only to the officers on watch. **Yes**

has each navigation lamp an automatic indicator as per Rule. **Yes** Secondary Batteries, are they constructed and fitted as per Rule. **Yes**

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight. **Yes**, are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; **No**

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected. **Installations wired and fitted in accordance with the Naval Manual of Explosive Regulations**, how are the cables led. **The Lead-Cased Cables are all led in Steel Conduit.**

where are the controlling switches situated. **Outside of these compartments & at least 2" clear of Bulkheads of these actual compartments**

are all fittings suitably ventilated. **Yes**, are all switches and lampholders constructed wholly of non-ignitable, non-absorbent materials. **Yes**

Heating and Cooking Appliances, are they constructed and fitted as per Rule. **Yes**, are air heaters constructed and fitted as per Rule. **Yes**

Signalling Projector **Searchlight** lamps, No. of **One 10" S/P**, whether fixed or portable. **Fixed**, are their fittings as per Rule. **Yes**

Arc Lamps, other than searchlight lamps, No. of **--**, are their live parts insulated from the frame or case. **--**, are their fittings as per Rule. **--**

Motors, are their working parts readily accessible. **Yes**, are the coils self-contained and readily removable for replacement. **Yes**, are the brushes, brush holders, terminals and lubricating arrangements as per Rule. **Yes**, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material. **Yes**, are they protected from mechanical injury and damage from water, steam or oil. **Yes**, are their axes of rotation fore and aft. **Yes**, if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type. **Totally Enclosed - Ventilated**

---, if not of this type, state distance of the combustible material horizontally or vertically above the motors. --- and ---

have machines of over 100 BHP been inspected by the Surveyors during manufacture and testing. **Yes** Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule. **Yes** Lightning Conductors, where lightning conductors are required, are these fitted as per Rule. **Steel Meshes carrying Oil having a Flash Point less than 150°F. Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings. Yes** are all fuses of the filled cartridge type. **No** are they of an approved type. **Yes**

If portable lamps for use in dangerous spaces are supplied, are they of a self-contained, battery-fed type approved by the Home Office. **Yes**

Spare Gear, if the vessel is for open sea service have spares been supplied as per Rule. **Yes**

PARTICULARS OF GENERATING PLANT.										
DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.			
		Kilowatts.	Volts.	Ampere.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.		
MAIN	2	120	225	534	1250	Steam Turbine				
AUXILIARY	2	60	225	266	750	Diesel	Diesel	Above 150°F		
EMERGENCY										
ROTARY TRANSFORMER										
GENERATOR, LIGHTING AND HEATING CONDUCTORS.										
DESCRIPTION.	No. of	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED
		No. per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	Circuit.	Rule.			
2 MAIN GENERATORS	1	1.0	127	0.103	534	932	110&120	110&120	Varnished	Lead Cased
2 MAIN GENERATORS	1	0.4	61	0.023	266	464	100&180	100&180	Cambric	
2 AUXILIARY GENERATOR S	1	0.4	61	0.093	266	464	100&180	100&180	" "	" "
EMERGENCY GENERATOR... ..										
ROTARY MOTOR TRANSFORMER(GENERATOR... ..										
ENGINE ROOM CIRCUIT(S) 1	1	0.06	19	0.064	90	135	30	30	" "	" "
BOILER ROOM " B(P). 1	1	0.06	19	0.064	90	135	30	30	" "	" "
AUXILIARY SWITCHBOARDS										
Interconnecting Cables 1	1	0.5	61	0.103	300	540	60	60	" "	" "
" " 1	1	0.5	61	0.103	300	540	100	100	" "	" "
De Gaussing Equipment 1	1	0.15	37	0.072	121	246	80	80	" "	" "
ACCOMMODATION										
Lighting CircuitN(S) 1	1	0.15	37	0.072	180	246	20	20	" "	" "
" " N(P) 1	1	0.15	37	0.072	180	246	20	20	" "	" "
Power CircuitP (S) 1	1	0.15	37	0.072	155	246	50	50	" "	" "
" " (P) 1	1	0.15	37	0.072	120	246	50	50	" "	" "
WIRELESS	1	0.0255	7	0.064	30	75	170	170	" "	" "
SEARCHLIGHT										
MASTHEAD LIGHT	1	0.003	64	0.008	0.36	10	140	Tough Rubber Sheath	Phosphor Bronze	
SIDE LIGHTS	1	0.003	64	0.008	0.36	10	70	" "	" "	Braided
COMPASS LIGHTS										
POOP LIGHTS										
CARGO LIGHTS										
ARC LAMPS										
HEATERS										
MOTOR CONDUCTORS.										
DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT. AMPERES.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED
		No. per Pole.	Total Nominal Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP										
MAIN BILGE LINE PUMPS										
GENERAL SERVICE PUMP										
EMERGENCY BILGE PUMP										
SANITARY PUMP										
CIRC. SEA WATER PUMPS										
CIRC. FRESH WATER PUMPS... ..										
REFRIG. COMPRESSOR Refrig. 1	1	1	0.01	7	0.044	18.2	31	300	Rubber	Lead cased
REFRIG. FRESH WATER PUMP Refrig. 1	1	1	0.003	3	0.036	3.0	10	50	"	" "
ENGINE TURNING GEAR										
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS										
OIL FUEL TRANSFER PUMP										
WINDLASS										
Boat WINCH PORT 1	1	1	0.06	19	0.064	113	135	200	Varnished	Lead
Boat WINCH STARBOARD 1	1	1	0.06	19	0.064	113	135	200	Cambric	Cased
WINCHES, AFT... ..										
STEERING GEAR—										
(a) MOTOR GENERATOR										
(b) MAIN MOTOR										
WORKSHOP MOTOR... ..										
VENTILATING FANS CircuitC(S) 11	1	0.15	37	0.072	80	246	20	20	Varnished	Lead
Ventilating Fans " C(P) 12	1	0.15	37	0.072	60	246	20	20	Cambric	Cased
Cargo Deck VentilationA(S) 3	1	0.15	37	0.072	120	246	50	50		
Cargo Deck VentilationA(P) 2	1	0.15	37	0.072	80	246	50	50		
Bow Door Motors 2	1	0.01	7	0.045	25	31	140	140		
Ramp Motor 1	1	0.06	19	0.064	118	135	540	540		

All Conductors are of annealed copper conforming to British Standard Specification No. 7 (or International Electro-technical Commission Publication No. 28).

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

For CANADIAN VICKERS LIMITED.

J. Kirkland
(J. Kirkland.) SHIPYARD MANAGER.

Electrical Engineers.

Date June 22nd, 1945.

COMPASSES.

Nearest
Distance between electric ~~motors~~ and standard compass 20 Feet

Nearest
Distance between electric ~~motors~~ or motor ~~s~~ and steering compass 24 Feet

The nearest cables to the compasses are as follows:—
Compass Corrector Coils are Fitted on Compasses in connection with De Gaussing Equipment.

A cable carrying 20 Ampères 10 feet from standard compass 10 feet from steering compass.

A cable carrying 12 Ampères 20 feet from standard compass 14 feet from steering compass.

A cable carrying 41 Ampères 22 feet from standard compass 25 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 1 W degrees on NW course in the case of the standard compass, and 1 W degrees on SW course in the case of the steering compass.

For CANADIAN VICKERS LIMITED.

J. Kirkland
(J. Kirkland.) SHIPYARD MANAGER.

Builder's Signature.

Date June 22nd, 1945.

Is this installation a duplicate of a previous case Yes If so, state name of vessel CN 948

General Remarks (State quality of workmanship, opinions as to class, &c. This Electrical Installation has been fitted on board this vessel under Special Survey in accordance with the Approved Plans and Specifications forwarded by the British Admiralty, and has been satisfactorily tested under full load conditions. Megger tests carried out and in order.

The workmanship and materials are good.

Copies of Generator Test Certificates attached hereto.

Total Capacity of Generators 360 Kilowatts.

The amount of Fee ... \$ 140.00 : 18 July 1945
When applied for,
When received.

Travelling Expenses (if any) Included

Committee's Minute FRI. 24 AUG 1945

Assigned Su F.E. machy. rpt.

H. G. Saunders
Surveyor to Lloyd's Register of Shipping.