

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office... MAR... 6. 1940

Date of writing Report.....19..... When handed in at Local Office... 5 MAR 1940... Port of... **HULL**

No. in Survey held at... **Goole**... Date, First Survey... 21. 12. 39... Last Survey... 10. 2. 1940...  
 Reg. Book. (Number of Visits... 9...)

on the... **Motor Vessel "ALACRITY"**... Tons { Gross..... Net.....

Built at... **Goole**... By whom built... **The Goole Shipbuilding & Repairing Co. Ltd.**... Yard No. **347**... When built... **1940**

Owners... **P. J. Everard Sons Ltd.**... Port belonging to... **London**

Electrical Installation fitted by... **Humber Electrical Engineering Co. Ltd.**... Contract No. .... When fitted... **1940**

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... **Parallel constant pressure** Voltage of supply for Lighting... **110**  
**two wire**

Heating... **Yes** Power... **110** Direct or Alternating Current, Lighting... **DC** Power... **DC** If Alternating Current state frequency... **Yes** Prime Movers,

has the governing been tested and found efficient when the whole load is suddenly thrown on and off... **Yes** Are turbine emergency governors fitted with a trip switch as per Rule... **Yes** Generators, are they compound wound... **Yes**, are they level compounded under working conditions... **Yes**,

if not compound wound state distance between generators... **Yes** and from switchboard... **Yes** 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... **Positive**

Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing... **Yes** 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... **5 1/2 kw Starboard & 14 kw Port side of 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... **Yes** and vertically... **Yes**, 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**

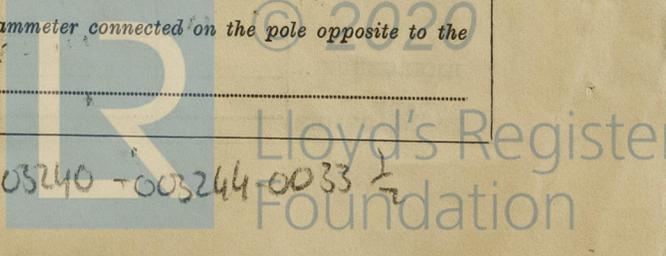
Switchboards, where are main switchboards placed... **Port side, engine room, aft end adjacent to Generator** are they in accessible positions, free from inflammable gases and acid fumes... **Yes**, are they protected from mechanical injury and damage from water, steam and oil... **Yes**, if situated near unprotected combustible material state distance from same horizontally... **Yes** and vertically... **Yes**, what insulation material is used for the panels... **Synthetic - Switched by Power Equip. Co. Ltd., London** if of synthetic insulating material is it an Approved Type... **Not known** 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... **D.P. change over switches & fuses for each generator**

and for each outgoing circuit... **D.P. switches & fuses circuit breakers for winches**

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule... **Yes** Instruments on main switchboard... **one** ammeters... **one** voltmeters... **Yes** 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 1/2, are the fuses an approved type 1/2, are all fuses labelled as per Rule 1/2, are the reversed current protection devices connected on the pole opposite to the equaliser connection ✓, have they been tested under working conditions ✓. Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule 1/2.

Cables, are they insulated and protected as per the appropriate Tables of the Rules 1/2, 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 3, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets 1/2. Are paper insulated and varnished cambric insulated cables sealed at the exposed ends ✓ 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 1/2, are cables laid under machines or floorplates 1/2, if so, are they adequately protected Conduit. Are cables in machinery spaces, galleys, laundries, etc., lead covered 1/2 or run in conduit ✓. State how the cables are supported and protected clipped to steel + woodwork or run in conduit.

Are all lead sheaths, armouring and conduits effectually bonded and earthed 1/2. Refrigerated chambers, are the cables and fittings as per Rule None. Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands 1/2, where unarmoured cables pass through beams, etc., are the holes effectively bushed 1/2 and with what material lead. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule 1/2. Emergency Supply, state position None and method of control None.

Navigation Lamps, are they separately wired 1/2 controlled by separate double pole switches 1/2 and fuses 1/2. Are the switches and fuses in a position accessible only to the officers on watch 1/2, is an automatic indicator fitted 1/2. Secondary Batteries, are they constructed and fitted as per Rule None, are they adequately ventilated ✓. Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof 1/2. Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present None, if so, how are they protected ✓.

and where are the controlling switches fitted ✓, are all fittings suitably ventilated 1/2, are all fittings and accessories constructed and installed as per Rule 1/2. Searchlight Lamps, No. of None, 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 1/2 and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil 1/2, if situated near unprotected combustible material state minimum distance from same horizontally ✓ and vertically ✓.

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 see below. Control Gear and Resistances, are they constructed and fitted as per Rule 1/2. 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 ✓, are all fuses of the cartridge type ✓, are they of an approved type ✓. If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flameproof type ✓. Spare Gear, if the vessel is for open sea service have spares been provided as per Rule see below are they suitably stored in dry situations ✓. Insulation Tests, has the insulation resistance of all circuits and apparatus been megger tested and found satisfactory 1/2.

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT			WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.		
		Kilowatts.	Volts.	Ampères.	Revs. per Min.	Fuel Used.	Flash Point of Fuel.
MAIN	one	14	110	127	1000	Oil Diesel engine	Heavy Oil Above 150° F
	one	5 3/4	110	52	1000	do	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	14	2	19.052	127	128	32	VIR	Conduit
" " EQUALISER	5 3/4	1	20	52	64	80	do	do
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

AUX. SWITCHBOARDS AND SECTION BOARDS	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
Accommodation	7.029	9	15	80	VIR	Conduit
Navigation	3.036	3	10	160	"	"

LIGHTING AND HEATING, ETC., CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
WIRELESS	7.029	6	15	160	VIR	Conduit
NAVIGATION LIGHTS	1.044	6	10	180	"	LC + "
LIGHTING AND HEATING						
Headhead Light	3.036	6	10	200	"	Conduit
Engine room	7.029	6	15	260	"	"
Accommodation	1.044	2	5	60	"	LC + "

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
Branch fuse	1	8 1/2	19.052	15	68	200	VIR	Conduit
Navigation Engine	1	8 1/2	20	15	68	90	"	"
	1	1	7.044	28	31	160	"	"

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.

BY THE HONORABLE ELECTRICAL ENGINEERS OF

*W. E. Hunt*

Electrical Engineers.

Date

COMPASSES.

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

Minimum distance between electric generators or motors and steering compass..... *125 ft generator 12 ft steering motor*

The nearest cables to the compasses are as follows:—

A cable carrying *5* Ampères ..... feet from standard compass *60* feet from steering compass.

A cable carrying *6* 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..... *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 ..... degrees on ..... course in the case of the steering compass.

*B. F. Cross*

Builder's Signature.

Date

Director

Is this installation a duplicate of a previous case..... *Yes*

If so, state name of vessel.....

*M/S. Spirituality*

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

*This electric installation has been fitted on board under special survey in accordance with the approved plans & the Rules. The workmanship & materials are good & when tried & tested under full working conditions it was found satisfactory in every respect. The spare is not on board but will be placed on board at Greenhithe by the owners. No makers certificates have yet been forwarded for the steering motor which has been supplied by the owners.*

Total Capacity of Generators..... *19 3/4* Kilowatts.

The amount of Fee ... .. £ *10* : *0* : ..

When applied for, *5 MAR 1940*

Travelling Expenses (if any) £ : : ..

When received, *1.5.1940*

*R. J. P. ...*

Surveyor to Lloyd's Register of Shipping.

*FRI 15 MAR 1940*

Committee's Minute .....

Assigned..... *See Hull 25. 50553*

2m.10.38.—Transfer. (MADE IN ENGLAND.) (The Surveyors are requested not to write on or below the space for Committee's Minute.)

