

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

MAY 31 1937

Date of writing Report

10

When handed in at Local Office

27/5/37

Port of

Newcastle-on-Tyne

No. in Survey held at  
Reg. Book. Supp.

Newcastle.

Date, First Survey

22 Feb.

Last Survey

21 May 1937.

(Number of Visits... 15)

90046 on the M.V. "Regent Panther"

Tons { Gross 9556  
Net 5799

Built at Newcastle.

By whom built Swan H. Wiggin Richardson Yard No. 1523 When built 1937

Owners C. T. Bowring & Co.

Port belonging to London.

Electric Light Installation fitted by Swan Hunter Wiggin Richardson Contract No. 1523 When fitted 1937.

Is the Vessel fitted for carrying Petroleum in bulk Yes.

## System of Distribution

Double wire system

Pressure of supply for Lighting

110

volts, Heating

volts, Power 110

volts.

Direct or Alternating Current, Lighting

Direct

Power

Direct

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 compound wound Yes

are they over compounded 5 per cent. Yes, if not compound wound state distance between each generator

Where more than one generator is fitted are they arranged to run in parallel No, is an adjustable regulating resistance fitted in series with each shunt field

approved Yes (3 in no enclosed herewith) Have certificates of test results for machines under 100 kw. been submitted and Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing

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

Engine room starboard

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

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 Engine room starboard.

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

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 Yes, is the non-hygroscopic insulating material of an approved

type Yes, 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

D.P.S fuses on each generator. D.R.C.O.S + D.P fuses on each outgoing circuit Are cupboards or compartments containing switchboards composed of

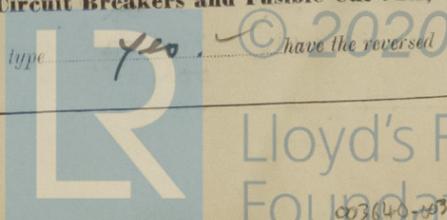
fire-resisting material or lined with approved material Instruments on main switchboard 3 ammeters 3

voltmeters 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

E lamps coupled to E through switches & fuses Switches, Circuit Breakers and Fusible Cut-outs, have the reversed

do these comply with the requirements of the Rules Yes are the fusible cutouts of an approved type Yes



current protection devices been tested under working conditions  **Joint Boxes, Section and Distribution Boards,** is the

construction, protection, insulation, material, and position of these as per rule  **Cables:** Single, twin, concentric, or multicore single are the cables insulated and protected as per Tables IV, V, X or XI of the Rules

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 2.8 kV

**Cable Sockets,** are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets  **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  or waterproof insulating tape  **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  Are cables in machinery spaces, galleys, lavatories, bathrooms and latrines lead covered or run in conduit

**Support and Protection of Cables,** state how the cables are supported and protected L.C. + A on steel supports on fore cast gangway + secured by teak clips. L.C. clipped up in acc. L.C. + A in machinery spaces clipped up

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

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

**Joints in Cables,** state if any, and how made, insulated, and protected home made

**Watertight Glands and Deck Tubes,** are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands

**Bushes in Beams and Non-watertight Partitions,** where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed  state the material of which the bushes are made lead

**Earthing Connections,** state what earthing connections are fitted and their respective sectional areas

are their connections made as per Rule

**Alternative Lighting,** are the groups of lights in the propelling machinery space arranged as per Rule  **Emergency Supply,** state position and method of control of the emergency supply and how the generator is driven

**Navigation Lamps,** are these separately wired  controlled by separate switch and separate fuses  are the fuses double pole

are the switches and fuses grouped in a position accessible only to the officers on watch

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

**Fittings,** are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight

are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected 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 in pump rooms

special gas tight fittings  how are the cables led in galvanised gas tight tubing outside pump rooms.

where are the controlling switches situated in midship pantry.

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

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

**Searchlight Lamps,** No. of 1 whether fixed or portable portable are their fittings as per Rule

**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  are the coils self-contained and readily removable for replacement

are the brushes, brush holders, terminals and lubricating arrangements as per Rule  are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material

water, steam or oil  are they protected from mechanical injury and damage from water, steam or oil

are their axes of rotation fore and aft  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

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  **Control Gear and Resistances,** are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule

**Lightning Conductors,** where lightning conductors are required, are these fitted as per Rule

**Ships 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

are all fuses of the fitted 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 type approved by the Home Office

**Spare Gear,** if the vessel for open sea service has spares been supplied as per Rule

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amperes.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	2	22	110	200	685	Steam engine		
AUXILIARY	1	5	110	46	800	Diesel engine		
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	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.			
MAIN GENERATOR	1	.25	37	.093	200	214	40	V.I.R.	L.C. + A.
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR	1	.04	19	.052	46	64	40	do	do
EMERGENCY GENERATOR									
ROTARY TRANSFORMER MOTOR GENERATOR									
ENGINE ROOM	1	.01	7	.044	16	31	200	do	do
ENGINE ROOM	1	.01	7	.044	13	31	120	do	do
AUXILIARY SWITCHBOARDS									
Navigation	1	.007	7	.036	6	24	600	do	do
Capt & midships Post	1	.0225	7	.064	26	46	530	do	do
Midships Stbd	1	.04	19	.052	34	64	510	do	do
Aft acc post	1	.0145	7	.052	37	37	210	do	do
do stbd	1	.007	7	.036	24	24	190	do	do
ACCOMMODATION									
Show Supply	1	.1	19	.083	100	118	200	do	do
WIRELESS	1	.0225	7	.064	15	46	540	do	do
SEARCHLIGHT	1	.002	3	.029	2	7.8	80	do	L.C.
MASTHEAD LIGHT	1	.002	3	.029	3	7.8	370	do	L.C. + A.
SIDE LIGHTS	1	.002	3	.029	3	7.8	120	do	L.C.
COMPASS LIGHTS	1	.002	3	.029	1	7.8	50	do	do
STERN DECK LIGHTS	1	.002	3	.029	3	7.8	480	do	L.C. + A.
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										
AIR COMPRESSOR										
FRESH WATER PUMP										
ENGINE TURNING GEAR										
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS										
OIL FUEL TRANSFER PUMP										
WINDLASS										
WINCHES, FORWARD										
WINCHES, AFT										
STEERING GEAR—										
(a) MOTOR GENERATOR										
(b) MAIN MOTOR										
WORKSHOP MOTOR	1	1	.04	19	.052	60	64	180	V.I.R.	L.C. + A.
VENTILATING FANS										
Midships	1	1	.003	3	.036	10	12	65	do	do
Aft	1	1	.003	3	.036	10	12	112	do	do
Eng room	1	1	.007	7	.036	24	24	224	do	do
Oil purifiers	2	1	.007	7	.036	20	24	50	do	do
Refing Air pump	1	1	.002	3	.029	6	7.8	40	do	do
Refing motor	1	1	.04	19	.052	36	64	130	do	do

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 SWAN, HUNTER, & WIGHAM RICHARDSON, LTD.

*Edison*

Electrical Engineers.

Date

19<sup>th</sup> May 37.

COMPASSES.

Distance between electric generators or motors and standard compass 225 feet.

Distance between electric generators or motors and steering compass 222 feet.

The nearest cables to the compasses are as follows:—

A cable carrying .1 Ampères on the feet from standard compass 6 feet from steering compass.

A cable carrying .1 Ampères 6 feet from standard compass on the 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. To be filled in after adjustment of compasses W.T.B.

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

FOR SWAN, HUNTER, & WIGHAM RICHARDSON, LTD.

*Wm Buchie*

Builder's Signature.

Date 19.5.37.

Is this installation a duplicate of a previous case Yes. If so, state name of vessel M.V. Regent Lion

General Remarks (State quality of workmanship, opinions as to class, &c. The above inst<sup>n</sup> has been fitted under special survey. The workmanship & materials used are good. The insulation resistance was satisfactory. The dynamos, governors main board, fuses, cables & fittings have been test<sup>d</sup> & started under working conditions & found satisfactory. This vessel is eligible in my opinion for notation D.F. & E.S.D.

*W.T.B.*

*W.T.B.*

31/5/37.

Total Capacity of Generators 49 Kilowatts.

The amount of Fee ... £ 27.5 : When applied for, 29.19.1937

Travelling Expenses (if any) £ : When received, 2.6.1937

*W.T. Badger*  
Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 1 JUN 1937

Assigned See Awe J.C. 95088

The Surveyors are requested not to write on or below the space for Committee's Minute.



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