

1 SEP 1959

Rpt. 13.

No. 25436.

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 28-8-59 When handed in at Local Office _____ 19____ Port of Southampton.

No. in Survey held at Southampton Date, First Survey 15-12-58 Last Survey 11-5-59
Reg. Book. _____ (No. of Visits 8)

on the "CARISBROOKE CASTLE" Tons {Gross 671.66
Net 245.82

Built at Woolston Works By whom built J. I. Thornycroft & Co. Ltd Yard No. 4183 When built 1959

Owners Southampton & I.O.W. Steam Packet Co Port belonging to Southampton

Installation fitted by J. I. Thornycroft & Co. Ltd When fitted 1959

Is vessel equipped for carrying Petroleum in bulk No Is vessel equipped with D.F. No E.S.D. No Gy.C. No Sub.Sig. No Radar No

Plans, have they been submitted and approved Yes System of Distribution 2 wire Voltage of Lighting 220

Heating - Power 220 D.C. or A.C., Lighting D.C. Power D.C. If A.C. state frequency -

Prime Movers, has the governing been found as per Rule when full load is thrown on and off Yes Are turbine emergency governors fitted with a trip switch - Generators, are they compound wound Yes, and level compounded under working conditions Yes

if not compound wound state distance between generators - and from switchboard - Are the generators 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 Yes and the results found as per Rule Yes

Position of Generators One on port side and 2 on starboard side in Engine Room

is the ventilation in way of generators satisfactory Yes are they clear of inflammable material and protected from mechanical injury and damage from water, steam and oil Yes Switchboards, where are main switchboards placed Aft. end of Engine Room, port side

are they in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water, steam and oil Yes, what insulation is used for the panels "PIERRITE", 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 construction as per Rule, including locking of screws and nuts Yes Description of Main Switchgear for each generator and arrangement of equaliser switches Triple pole marine type, air break circuit breakers. Equaliser switches make first and break last.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit D.P. knife switches with fuses on each pole.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 4 ammeters 4 voltmeters - synchronising devices. For compound machines in parallel are the ammeters and reversed current protection devices connected on the pole opposite to the equaliser connection Yes Earth Testing, state means provided Switch fuse and indicator light in series to earth on each pole.

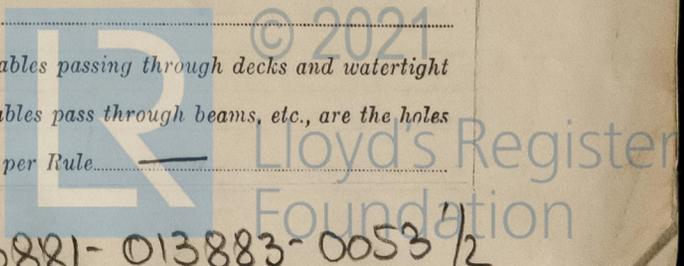
Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yes make of fuses "Artic", are all fuses labelled Yes If circuit breakers are provided for the generators, at what overload do they operate 150%, and at what current do the reversed current protective devices operate 150%

Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule Yes

Cables, are they insulated and protected as per Rule 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 > 6%, are the ends of all cables having a sectional area of 0.01 square inch and above provided with soldering sockets Yes Are all paper insulated and varnished cambric insulated cables sealed at the ends - 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 any cables laid under machines or floorplates Yes, if so, are they adequately protected Yes Are cables in machinery spaces, galleys, laundries, etc., lead covered No or run in conduit No or of the "HR" type Yes State how the cables are supported or protected Run on metal trays and secured by metal clips.

Are all lead sheaths, armouring and conduits effectually bonded and earthed - 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 effectually bushed Yes Refrigerated chambers, are the cables and fittings as per Rule -

48



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LIGHTING, HEATING, WIRELESS, NAVIGATION LIGHTS, ETC., CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
Navigation Lights	1	2x3/029	0.27	5.	350	Rubber	P.C.P.
Room Lighting Circuits	1	3/029					

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes Emergency Supply, state position Yes

Navigation Lamps, are they separately wired Yes controlled by separate double pole switches 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 Is an alternative supply provided Yes

Secondary Batteries, are they constructed and fitted as per Rule — are they adequately ventilated — state battery capacity in ampere hours —

Fittings, are all fittings on weather decks, in ~~stairholds and~~ engine rooms and wherever exposed to drip or condensed moisture, weatherproof Yes Are any 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 — Are all fittings suitably ventilated —

Searchlight Lamps, No. of —, whether fixed or portable — are they of the carbon arc or of the filament type —

Heating and Cooking, is the general construction as per Rule Yes are the frames effectually earthed Yes are heaters in the accommodation of the convection type — Motors, are all motors constructed and installed as per Rule and placed in well-ventilated compartments in which inflammable gases cannot accumulate and protected from damage from water, steam and oil Yes

Are motors coupled to oil fuel transfer and pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment Yes 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 sea services been supplied and the results found as per Rule Yes

Control Gear and Resistances, are they constructed and fitted as per Rule Yes 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 an Approved Cartridge Type — make of fuse — 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 —

E.S.D., if fitted state maker — location of transmitter — and receiver —

Spare Gear, if the vessel is for open sea service have spares been provided as per Rule and 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	MAKER.	RATED AT				TYPE.	PRIME MOVER.
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.		
MAIN	3	Campbell & Wheeler	50	220	227	1350	Oil Engine	Crossley Bros
EMERGENCY ROTARY TRANSFORMER	1	Electrodynamics Co.	5	220	22	1450		

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
		No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	50	1	0.19 in.	228	260	60	Mineral	Copper (Pyrotex)
" EQUALISEE		1	0.069 in.	114	200	30	"	"
EMERGENCY GENERATOR		1	7/064	13	46	360	Rubber	P.C.P.
ROTAARY TRANSFORMER: MOTOR		1	1/076	22.8	32	24	Mineral	Copper (440V grade Pyrotex)
" GENERATOR	5	1	1/076	22.8	32	24	Mineral	Copper (440V grade Pyrotex)

MAIN DISTRIBUTION CABLES (to Section Boards, Distribution Fuse Boards, etc.).

DESCRIPTION.	No.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Fuseboard "F"	1	1/076	18	32	75	Mineral	Copper (Pyrotex)
" "G"	1	1/136	58	90	195	"	"
" "H"	1	1/136	53.4	90	90	"	"
" "J"	1	1/094	35	55	210	"	"
" "L"	1	1/076	17	32	90	"	"
" "O"	1	1/136	61	90	210	"	"
" "P"	1	1/076	26	32	285	"	"
" "Q"	1	1/076	19	32	210	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Bilge & G.S. Pumps	2	7.5	1/094	30	55	400	Mineral	Copper (Pyrotex)
M.E. Cooling Water Pumps	2	4	1/076	17	32	400	"	"
Fire Service Pump	1	10	1/094	40	55	400	"	"
Fuel Transfer Pump	1	34	3/036	4	10	360	Rubber	P.C.P.
Air Compressor	1	15	1/136	59	90	300	Mineral	Copper (Pyrotex)
Steering Gear	1	4.5	1/076	19	32	540	"	"

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.

For JOHN I. THORNYCROFT & Co. LIMITED

[Signature]

Electrical Contractors.

Date 28/8/59

GENERAL MANAGER
SOUTHAMPTON

COMPASSES.

Have the compasses been adjusted under working conditions

Yes.

For JOHN I. THORNYCROFT & Co. LIMITED

[Signature]

Builder's Signature.

Date 28/8/59

GENERAL MANAGER
SOUTHAMPTON

Have the foregoing descriptions and schedules been verified and found correct

Yes.

Is this installation a duplicate of a previous case

No.

If so, state name of vessel

Plans. Are approved plans forwarded herewith

Yes.

If not, state date of approval

Certificates. Are certificates of test for motors engaged on essential sea 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 auxiliary electrical equipment of this vessel has been installed under Special Survey in accordance with the Rules, approved plans and the Secretary's letters.

The materials used and workmanship are of good quality.

The installation has been examined and tested under working conditions and insulation tests have been carried out with satisfactory results.

The auxiliary electrical equipment of this vessel is eligible, in my opinion, for classification.

Total Capacity of Generators 150. Kilowatts.

The amount of Fee ... £ 64.10 : When applied for, 31/8/59

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

[Signature]

Surveyor to Lloyd's Register of Shipping.

FRIDAY 18 SEP 1959

Committee's Minute

Assigned See Rpt. 1

2m. 3d. Transfer. (MADE AND PRINTED IN ENGLAND.)
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

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2.9.59.



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Foundation