

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 Whoolston 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 220Heating - 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 fittedwith 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 runin parallel Yes, are shunt field regulators provided Yes Is the compound winding connected to the negative or positive poleNegative Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing - Have certificates oftest for machines under 100 kw. been supplied Yes and the results found as per Rule YesPosition of Generators One on port side and 2 on starboard side in Engine Roomis the ventilation in way of generators satisfactory Yes are they clear of inflammable material and protected from mechanical injury anddamage from water, steam and oil Yes Switchboards, where are main switchboards placed Aft. end of EngineRoom, 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 insulatingmaterial is it an Approved Type Yes, if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom asper Rule - Is the construction as per Rule, including locking of screws and nuts Yes Description of Main Switchgearfor each generator and arrangement of equaliser switches Triple pole, marine type, air break Circuit BreakersEqualiser switches make first and break lastand the switch and fuse gear (or circuit breakers) for each outgoing circuit D.P. Knife switches with fuseson each poleAre compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 4ammeters 4 voltmeters - synchronising devices For compound machines in parallel are the ammeters and reversed currentprotection devices connected on the pole opposite to the equaliser connection Yes Earth Testing, state means providedSwitch fuse and indicator light in series to earth on each poleSwitches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yesmake of fuses "Artic", are all fuses labelled Yes If circuit breakers are provided for the generators, at whatoverload do they operate 150%, and at what current do the reversed current protective devices operate 15%Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule YesCables, 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 sectionalarea of 0.01 square inch and above provided with soldering sockets Yes Are all paper insulated and varnished cambric insulatedcables 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 theyadequately protected Yes Are cables in machinery spaces, galleys, laundries, etc., lead covered No or run in conduit Noor of the "HR" type Yes State how the cables are supported or protected Run on metal trays andsecured by metal clipsAre all lead sheaths, armouring and conduits effectually bonded and earthed - Are all cables passing through decks and watertightbulkheads provided with deck tubes or watertight glands Yes, where unarmoured cables pass through beams, etc., are the holeseffectively bushed Yes Refrigerated chambers, are the cables and fittings as per Rule -

013881-013883-0053/2



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.
Recessed Lighting Circuits	1	3/029					

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
Bilge & G.S. Pumps	2.	7.5.	1.	1/094.	30	55.	400.	Mineral	Copper (Pyrotex).
M.E. Cooling Water Pumps	2.	4.	1.	1/076.	17.	32.	400.	"	"
Fire Service Pump	1.	10	1.	1/094.	40.	55.	400.	"	"
Fuel Transfer Pump	1.	34.	1.	3/036.	4.	10.	360.	Rubber.	P.C.P.
Air Compressor	1.	15.	1.	1/136.	59.	90.	300.	Mineral	Copper (Pyrotex)
Steering Gear	1.	4.5.	1	1/076.	19	32.	540.	"	"

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 Yes are they adequately ventilated Yes

state battery capacity in ampere hours Yes

Fittings, are all fittings on weather decks, in storerooms 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 Yes Are all fittings suitably ventilated Yes

and where are the controlling switches fitted Yes are they of the carbon arc or of the filament type Yes

Searchlight Lamps, No. of Yes, whether fixed or portable Yes are the frames effectually earthed Yes are heaters in the 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 Yes 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 Yes 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 Yes are all fuses of an Approved Cartridge Type Yes make of fuse Yes Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships Yes Are the cables lead covered as per Rule Yes

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

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				PRIME MOVER.	
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN ...	3.	Campbell & Escherwood.	50.	220	227	1350.	Bel Engine.	Crosby Bros
EMERGENCY ...	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)
" " EQUALISER ...		1	0.069 in.	114	200	30.	"	"
EMERGENCY GENERATOR ...		1.	7/064.	13.	46.	360.	Rubber.	P.C.P.
ROTARY TRANSFORMER: MOTOR ...	5.	1.	1/076.	22.8.	32.	24.	Mineral	Copper (440V. grade Pyrotex)

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

DESCRIPTION.								
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.	"	"	



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

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

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

When received,

19

Travelling Expenses (if any) £ :

Surveyor to Lloyd's Register of Shipping.

FRIDAY 18 SEP 1959

Committee's Minute

Assigned

See Rpt. 1