

Rpt. 13.

No. 27563

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 25/4/ 1962. When handed in at Local Office 25/4/ 1962. Port of SOUTHAMPTON.

No. in Survey held at Southampton. Date, First Survey 17/11/61. Last Survey 1/5/ 1962. Reg. Book. (No. of Visits 10.)

on the "OSBORNE CASTLE" Tons Gross 735 Net

Built at Southampton. By whom built J.I. Thornycroft & Co. Ltd. Yard No. 4196 When built 1962.

Owners Southampton, I.O.W. & South of England R.M.S.P. Co. Ltd. Port belonging to Southampton.

Installation fitted by J.I. Thornycroft & Co. Ltd. When fitted 1962.

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 Yes.

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

Heating - Power 220 v. 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 Engine Room, port and starboard sides.

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 Engine Room, port, aft.

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 Sindanyo, 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.

D.P. Circuit Breakers

and the switch and fuse gear (or circuit breakers) for each outgoing circuit.

D.P. Rotary switches & fuses.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule - 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

Earth Lamps (positive & negative).

Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yes

make of fuses Snydlock, are all fuses labelled Yes. If circuit breakers are provided for the generators, at what

overload do they operate 15%, and at what current do the reversed current protective devices operate 30 amps.

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 12.9, 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

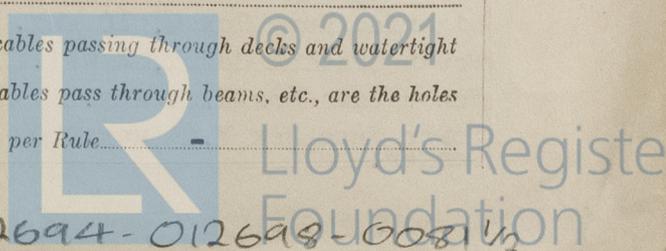
adequately protected Yes. Are cables in machinery spaces, galleys, laundries, etc., lead covered No, or run in conduit Yes

or of the "HR" type Yes. State how the cables are supported or protected on cable tray fixed with clips.

Are all lead sheaths, armouring and conduits effectually bonded and earthed Yes. 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

effectively bushed Yes. Refrigerated chambers, are the cables and fittings as per Rule -



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

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 stokeholds 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. -

and where are the controlling switches fitted. - Are all fittings suitably ventilated. Yes

Searchlight Lamps, No. of 2, whether fixed or portable. Portable, are they of the carbon arc or of the filament type. Filament

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. -

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				PRIME MOVER.	
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN ...	3	Sunderland Forge	50	220	227	1250	Diesel	Lister
Shore Supply.	1	Electro Dynamic Construction.	7.5	220	34	1450	A.C. Motor	Electro Dynamic Construction.
EMERGENCY ...	-							
ROTARY TRANSFORMER	-							

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 sq. in.	227			Mineral	Copper covered.
" " EQUALISEE ...			.06 sq. in.				"	" "
EMERGENCY GENERATOR ...	7.5		.007 sq. in.	34			Mineral	Copper covered.
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

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

DESCRIPTION.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Important Power Fuse Box F, 6 way.	.007sq. in.	32.1	90	Mineral.	Copper Covered.
Power Fuse Box G, 12 way.	.0145sq. in.	43.2	204	"	" "
Power Fuse Box H, 8 way.	.0225sq. in.	90.7	96	"	" "
Important Lighting Fuse Box J, 10 way.	.007sq. in.	19.7	169	"	" "
Lighting Fuse Box L, 10 way.	.007sq. in.	19.3	96	"	" "
Power Section Box N, 2 way.	.0145sq. in.	71	258	"	" "
Lighting Section Box O, 2 way.	.0145sq. in.	44.4	204	"	" "
Lighting Fuse Box P, 10 way.	.0045sq. in.	17.2	276	"	" "
Lighting Fuse Box Q, 10 way.	.0045sq. in.	19.7	168	"	" "
Power Section Box T, 2 way.	.0145sq. in.	69.8	216	"	" "
Power Fuse Box X, 4 way.	.01 sq. in.	54.5	90	"	" "
Power Fuse Box Y, 4 way.	.0145sq. in.	21	96	"	" "
Cooker.	.01 sq. in.	35.5	216	"	" "

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.			
Cooker from Section Box 'N'.		7/.052"	35.5		40		
" " " " "		7/.052"	35.5		40		
Lighting FB 0/1 12 way from SB 'O'.		19/.052"	32.1		10		P.C.P. Sheathed
Lighting FB 0/2 6 way from SB 'O'.		7/.029	12.3		10		Rubber Taped, Braided &
Nav. FB from FB 'P'.		3/.036"	1.63		20		Compounded HR types.
Nav. FB from FB 'O/2'.		3/.036"	1.63		100		
Coffe Boiler from section Box T.		7/.052"	34.1		20		
Cooker from Section Box T.		7/.052"	35.5		40		

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Pump for Remp Winch.	1	20	.0225sq. in.	79	420	Mineral.	Copper covered.
Pump for Capstan.	1	20	.0225sq. in.	79	480	"	" "
Bilge Pump.	1	15	.01sq. in.	60	196	"	" "
General Service Pump.	1	15	.01sq. in.	60	228	"	" "
Air Compressor.	1	15	.01sq. in.	60	156	"	" "
Aft Capstan.	1	10	.007sq. in.	41	252	"	" "
Fire Fighting Pump.	1	10	.007 sq. in.	40	164	"	" "
Steering Motor.	1	4.5	.0045sq. in.	17.6	396	"	" "
Fresh Water Circ. Pump.	1	4	.0045sq. in.	17.9	138	"	" "
Standby Fresh Water Circ. Pump.	1	4	.0045sq. in.	17.9	120	"	" "
Supply Fan.	1	4.6	.007sq. in.	19.0	224	"	" "
S.W. Circ. Pump.	1	5	7/.044	21.0	24	Rubber	P.C.P. Sheathed. Taped, Braided & compounded H.R. Type.

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 MANAGER  
SOUTHAMPTON

Electrical Contractors. Date 2. 5. 62.

COMPASSES.

Have the compasses been adjusted under working conditions <sup>Yes</sup>  
For JOHN I. THORNYCROFT & Co. LIMITED

*[Signature]*  
ELECTRICAL MANAGER  
SOUTHAMPTON

Builder's Signature. Date 2. 5. 62.

Have the foregoing descriptions and schedules been verified and found correct <sup>Yes</sup>.

Is this installation a duplicate of a previous case <sup>Yes</sup> If so, state name of vessel "Carisbrook Castle".

Plans. Are approved plans forwarded herewith <sup>Yes</sup>. If not, state date of approval 28-9-61.

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith <sup>Yes</sup>.

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 quality of workmanship are of good standard.

The installation has been examined and tried 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, 11/5/ 1962

Travelling Expenses (if any) £ 1. : 10. : When received, 19

*[Signature]*  
Surveyor to Lloyd's Register of Shipping.  
A.G. Pemberton.

FRIDAY - 8 JUN 1962

Committee's Minute

Assigned *[Signature]*

18.5.62.

*[Signature]*

2m.3.4. 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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