

Rpt. 13.

No. 35403

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

3 AUG 1950

JUL 28 1950

Date of writing Report 26.7.50 19... When handed in at Local Office... 19... Port of Sunderland

No. in Survey held at Sunderland Date, First Survey 23.6.50 Last Survey 21.7.50 19... (No. of Visits 5)

Reg. Book. on the s.s. "BRENT KNOLL" Tons { Gross 1362 Net 660

Built at Sunderland By whom built S.P. Austin & Son. Ltd. Yard No. 404 When built 1950

Owners British Electricity Authority Port belonging to London.

Installation fitted by Sunderland Forge & Engineering Co. Ltd When fitted 1950

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

Plans, have they been submitted and approved yes System of Distribution 2-wire ins. Voltage of Lighting 110

Heating 110 Power - 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 no, 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 on raised flat aft of 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 on angle framework near generators

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 Ebony "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 a double-pole, quick-break knife switch and fuses

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

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule yes Instruments on main switchboard 2

ammeters 2 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 - Earth Testing, state means provided E.lamps

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

make of fuses G.E.C., are all fuses labelled yes If circuit breakers are provided for the generators, at what overload do they operate - and at what current do the reversed current protective devices operate -

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 less than 6.7, 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 yes 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 no, if so, are they adequately protected - Are cables in machinery spaces, galleys, laundries, etc., lead covered yes or run in conduit -

or of the "HR" type - State how the cables are supported or protected engine room & forward mains, V.I.R. in steel conduit : In accommodation, L.C. cables on the surface clipped to wooden grounds.

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 yes



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

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...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... 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... 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... Hughes MS.XII... location of transmitter frame 64/5 P... and receiver frame 64/5 S... 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.		TYPE.	MAKER.
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.			
MAIN ...	I	S.F.&Eng.Co.Ltd.	10	110	91	600	Steam	S.F.&Eng.Co.Ltd	
	I	do.	6	110	54.5	1000	Diesle	Ruston-Hornsby	
EMERGENCY ...									
ROTARY TRANSFORMER									

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULA-TION.	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 ...	10	I	19/.052	91	110	46	V.C.	L.C.A.
" " EQUALISER ...	6	I	7/.052	54.5	57	24	"	"
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR...								

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

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULA-TION.	PROTECTIVE COVERING.
Aft Section Panel - SB.I.	I	7/.052	37	37	92	V.I.R.	Braided.
Midship ditto SB-2	I	19/.083	68	118	320	"	Conduit
Shore Connection	I	19/.083	-	118	74	"	"
Engine Room DB.	I	7/.064	10	46	16	"	L.C.

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

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULA-TION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
Aft SB-I. to Poop DB.	I	1/.064	7	10	44	V.I.R.	L.C.
" Crew Accommodation	I	1/.064	8.2	10	46	"	"
" " "	I	1/.064	8.4	10	40	"	"
" " "	I	1/.064	4.5	10	40	"	"
" " "	I	1/.064	7.3	10	45	"	"
Midship SB-2 to Navigation G.O.S.	I	1/.064	1.5	10	60	"	"
" " "	I	7/.044	22.4	31	60	"	"
" Upper Bridge	I	7/.044	20	31	45	"	"
" Lower Bridge	I	1/.064	9	10	30	"	"
" Forecastle	I	7/.044	6.4	31	210	"	"
Captains' Heater	I	1/.064	9	10	60	"	"
Midship SB-2 to hotcupboard	I	1/.064	9	10	36	"	"
Echo Sounding Supply	I	1/.044	5	5	60	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULA-TION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
Domestic Refrige.	I	0.75	I	3/.036	8.5	10	30	V.I.R.	L.C.A.B.

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.

Electrical Contractors.

Date 26/4/50

James Hill

COMPASSES.

Have the compasses been adjusted under working conditions... **yes**

C. P. AUSTIN & SON, LTD.

Young

Builder's Signature.

Date 28.7.50

Have the foregoing descriptions and schedules been verified and found correct... **yes**

Is this installation a duplicate of a previous case... **yes** If so, state name of vessel **S.S. "Poole Harbour"**

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 electrical equipment of this vessel has been installed under special survey in accordance with the approved plans and the "Rules For Electrical Equipment". The materials and workmanship are good: On completion, satisfactory trials of the equipment were witnessed and the insulation resistance of all circuits was measured and found good. This equipment is in my opinion suitable for a classed vessel.

Noted Sep 18/8/50.

Total Capacity of Generators (1 x 10, 1 x 6) 16 Kilowatts.

The amount of Fee ... £20.0.0.

When applied for,

AUG - 2 1950

When received,

19

Travelling Expenses (if any) £

Surveyor to Lloyd's Register of Shipping.

B. D. Mann

FRI, 1 SEP 1950

Committee's Minute

Assigned

Su F. E. Welch. rpt.

