

No. 135046

REPORT ON ELECTRICAL EQUIPMENT. 23 APR 1952

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

of writing Report 26. 3. 1952 When handed in at Local Office 19 Port of LIVERPOOL

Survey held at Birkhead Date, First Survey 11/12/51 Last Survey 17/3/1952

Book. (No. of Visits 9) Tons { Gross 12741 Net

225 on the S.S. 'EVA PERON'

Built at Birkhead By whom built Cammell Laird & Co. Ltd Yard No. 1206 When built 1952

Owners Port belonging to Bannockburn

Installation fitted by Cammell Laird & Co. Ltd When fitted 1952

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

Plans, have they been submitted and approved Yes System of Distribution Two bars Voltage of Lighting 110

Rating 220 Power 220 D.C. or A.C., Lighting D.C. Power D.C. If A.C. state frequency —

Time 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 Yes Generators, are they compound wound Yes, and level compounded under working conditions Yes

not compound wound state distance between generators — and from switchboard — Are the generators arranged to run

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 Yes Have certificates of

test for machines under 100 kw. been supplied Yes and the results found as per Rule Yes

Position of Generators In main 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 In engine room on

special platform

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 Shidango, 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 Single pole circuit breakers fitted with overboard

and reserve current trips.

Is the switch and fuse gear (or circuit breakers) for each outgoing circuit Double pole circuit breakers on

double pole switch and fuses.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 7

Ammeters 6 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

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

Type of fuses L. breakers (Lutron) approved per Secretary's letter 14.1.49

are all fuses labelled Yes If circuit breakers are provided for the generators, at what

overload do they operate Cut out at 10% 1/2, and at what current do the reversed current protective devices operate 10% R.C.

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

ables, 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 volts, are the ends of all cables having a sectional

area of 0.01 square inch and above provided with soldering sockets Yes Are all cables 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 Yes, if so, are they

adequately protected Yes Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit —

of the "HR" type — State how the cables are supported or protected Main cables supported on main

gangway by steel plate - Cables L.C.A. Sub-mains & machinery spaces L.C.A. clipped.

Accommodation L.C. Clipped. All cables protected as necessary.

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

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

Navigation Lamps, are they separately wired Yes controlled by separate double pole switches and fuses Yes Are the switches and fu
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 Low power 57 a.h.

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 Yes
if so, how are they protected 4 lamp proof fittings

and where are the controlling switches fitted outside spaces Are all fittings suitably ventilated Yes

Searchlight Lamps, No. of 2 whether fixed or portable fixed 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

accommodation of the convection type Yes Motors, are all motors constructed and installed as per Rule and placed in well-venti

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 p

compartment Yes Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing Yes

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

Rule Yes Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships

complied with Yes are all fuses of an Approved Cartridge Type Yes make of fuse L. K. (L. K. Co.) Are the fittings for p

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 Anglo 1952 B. Location of transmitter Coffordan Engine and receiver Coffordan Engine

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.	MAKER.
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.		
MAIN	2.	Sunderland Forge	250	220	1136	1200	St Turbine	Peter Brothers Ltd
	2	do	75	220	344	500	Oil Engine	Katharine Gas Co. & Co
EMERGENCY ...								
ROTARY TRANSFORMER	2	do	30	110	272	1400	St. Martin	Sunderland Forge

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	250	3	37/103	1136	1136	186	V.C.	L.C.A
" " EQUALISER		2	4/093	-	984	78	"	"
" " "	75	3	37/103	344	408	228	"	"
" " "		1	37/103	-	408	114	"	"
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR	47 HP	1	19/083	158	208	138	"	"
" " GENERATOR	30	1	37/083	272	314	120	"	"
" " EQUALISER		1	19/083	-	802	60	"	"

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

DESCRIPTION.								
Headship Section Board.	S1.	1	19/083	30	202	600	V.C.	L.C.A
" " "	S1.	1	19/083	110	202	600	"	"
Off " "	S2.	1	7/064	66	80	172	"	"
Refinery " "	S3.	1	19/052	57	110	390	"	"
Galley " "	S4.	1	19/088	93	202	336	"	"
Engine Room " "	S5.	1	19/052	77	110	130	"	"
" " "	S6.	1	7/064	60	80	190	"	"
" " "	S7.	1	19/052	102	110	180	"	"
" " "	S8.	1	19/064	42	143	240	"	"
Slow Connection.		1	37/083	-	314	130	"	"
Headship Lighting Section Box	S1.	1	19/083	75	202	600	"	"
" " "	S1.	1	19/083	45	202	600	"	"
Off " "	S2.	1	19/064	100	143	170	"	"

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

DESCRIPTION.	No. in Parallel per Pole.	CONDUCTORS. Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULA-TION.	PROTECTIVE COVERING.
			In the Circuit.	Rule.			
Navigation Lighting DB. Main Alternator D1.	1	7/029	2.5	15	140	V.I.R.	L.C.
Refinery " "	D2	7/064	18	80	140	V.C.	"
Refinery " "	D3	7/064	30	31	140	V.I.R	"
Refinery Lighting (Workman) D3A	1	7/064	17	31	20	"	"
Refinery Deck Acc. Lighting D4	1	7/064	19	31	130	"	"
Refinery " " Post D5	1	7/064	24	42	70	V.C	"
Refinery " " Stos. D5A	1	7/064	22	42	80	"	"
Refinery Lighting D6	1	7/064	18	31	80	V.I.R	"
Refinery Radiator D7	1	7/064	9	31	90	"	"
Refinery Deck Lighting Post for D7A	1	7/064	28	31	104	"	"
Refinery " " Off D7A	1	7/064	14	31	110	"	"
Refinery " " Stos for D8	1	7/064	30	31	154	"	"
Refinery " " Off D8A	1	7/064	15	31	110	"	"
Refinery " " Post for D9	1	7/064	12.5	31	20	"	"
Refinery " " Stos " D9A	1	7/064	25.5	31	120	"	"
Refinery " " Post for D10	1	7/064	22	31	145	"	"
Refinery " " Off D10A	1	7/064	12	31	116	"	"
Refinery " " Stos for D11	1	7/064	29	31	175	"	"
Refinery " " Off D11A	1	7/064	18	31	116	"	"
Refinery Power D12	1	7/064	11	31	140	"	"
Refinery Galley Gear D13	1	7/064	16	31	28	"	L.C.A.
Refinery Engine Room Lighting Post for D14	1	7/064	23	80	80	V.C	"
Refinery " " Off D14A	1	7/064	28	80	200	"	"
Refinery " " Stos for D5	1	7/064	57	80	220	"	"
Refinery " " Stos for D5A	1	7/064	24	80	120	"	"
Refinery Control	1	7/064	15	31	320	V.I.R	"
Refinery Radiator	1	7/064	15	31	80	"	L.C.
Refinery Wireless	1	7/064	20	31	130	"	L.C.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
Main Circulating Pump.	1	120	1	61/093	446	492	170	V.C
Ballast	1	37	1	19/083	143	202	220	"
General Service	1	30	1	19/064	118	143	220	"
Refinery " "	1	30	1	19/064	118	143	200	"
Refinery " "	2	22	1	19/052	90	110	136	"
Refinery " "	2	17	1	7/064	68	80	220	"
Refinery " "	2	14	1	7/064	58	80	120	"
Refinery " "	2	12	1	7/064	48	80	120	"
Refinery " "	1	11.5	1	7/064	46	80	120	"
Refinery " "	2	40	1	19/083	185	202	446	"
Refinery " "	2	5	1	7/064	21	31	60	V.I.R
Refinery " "	1	1.5	1	7/029	9	15	80	"
Refinery " "	1	6	1	7/064	26	31	60	"
Refinery " "	1	1.5	1	7/029	9	15	60	"
Refinery " "	1	1.5	1	7/029	9	15	55	"
Refinery " "	2	1.5	1	7/029	6.9	15	120	"
Refinery " "	2	6.3	1	7/064	26	31	140	"
Refinery " "	2	4	1	7/064	16	31	40	"
Refinery " "	1	7	1	7/064	29	31	180	"
Refinery " "	1	7	1	7/064	30	31	140	"
Refinery " "	1	5	1	7/064	21	31	160	"
Refinery " "	2	0.5	1	3/036	3	10	80	"
Refinery " "	4	7.5	1	7/064	25	31	280	"
Refinery " "	2	3	1	7/064	13	31	90	"
Refinery " "	1	0.75	1	3/036	4	10	90	"
Refinery " "	3	0.75	1	3/036	4	10	140	"
Refinery " "	2	5	1	7/064	21	31	100	"
Refinery " "	1	1	1	3/036	5	10	216	"
Refinery " "	2	-	1	19/052	83	110	160	"
Refinery " "	-	-	1	7/064	32	31	80	"
Refinery " "	-	-	1	7/029	6	15	80	"
Refinery " "	-	-	1	7/064	12.5	31	90	"
Refinery " "	-	-	1	7/064	14	31	90	"

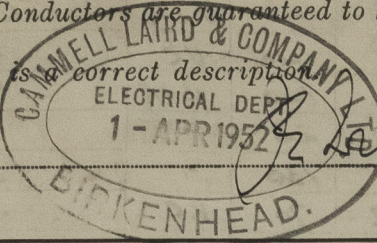
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The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.

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 of



Electrical Contractors.

Date

COMPASSES.

Have the compasses been adjusted under working conditions

Yes.

FOR AND ON BEHALF OF
CAMMELL LAIRD & COMPANY, LIMITED
By *Bydie*
TECHNICAL MANAGER
SHIPBUILDING DEPT.

Builder's Signature.

Date 11 APR 1952

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

*General Sqn Monitor
HMS Gannet
HMS Gannet*

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 approved plans and the Rules for Electrical Equipment. The installation has been tested under working conditions, insulation tests carried out and found satisfactory. The materials and workmanship are good and, in my opinion, the electrical equipment is eligible to be accepted for classification with this Society.

Total Capacity of Generators

650.

Kilowatts

The amount of Fee ...

£124 : 10

When applied for,

Due Liverpool

99 : 12

16 APR 1952

" London

12 : 9

When received,

" Sunderland

12 : 9

Travelling Expenses (if any) £

19

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

LIVERPOOL

22 APR 1952

Assigned

See Minute on Liverpool H. Mch. Rps.