

No. 135666

REPORT ON ELECTRICAL EQUIPMENT.

7 AUG 1952

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 16th June 1952. When handed in at Local Office 9.7.1952 Port of LIVERPOOL.

Survey held at BIRKENHEAD. Date, First Survey 19/10/51 Last Survey 10/6/1952 (No. of Visits 13)

5944 on the S.S. "BRITISH CROWN" Tons Gross Net

Built at BIRKENHEAD. By whom built CANNELL LAIRD & CO. LD. Yard No. 1208. When built 1952

Owners BRITISH TANKER CO. LTD. Port belonging to LONDON.

Installation fitted by CANNELL LAIRD & CO. LD. When fitted 1952.

Is 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 3 phase 3 wire Voltage of Lighting 110

Power 440 D.C. or A.C., Lighting D.C. Power A.C. If A.C. state frequency 60 c.p.s.

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 YES 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 (A.C. with A.V.C.) 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 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 switchboard flat.

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 A.C. Board, "Dead front type". D.S. Sundry of synthetic insulating

material is if 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.C. Triple pole circuit breakers with overload, under

voltage & remote power features and triple pole isolator.

D.C. Triple pole circuit breakers (one pole equaliser) with overload & remote current trips.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit A.C. Triple pole circuit breakers.

D.C. Double pole switch & fuses

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule YES Instruments on main switchboard A.C. 26

ammeters D.C. 2. voltmeters 1 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.

A.C. Leakage indicator D.C. Earth lamps.

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

make of fuses Cable Optimum or Seaman are all fuses labelled YES If circuit breakers are provided for the generators, at what

overload do they operate 50% 125% 150% 200% 250% 300% 350% 400% 450% 500% 550% 600% 650% 700% 750% 800% 850% 900% 950% 1000% and at what current do the reversed current protective devices operate 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

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 5-4 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 having a sectional area of 0.01 square inch and above provided with soldering sockets YES

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 —

or of the "HR" type — State how the cables are supported or protected Main cables on fore & aft gangway

L.C.A.B. supported on steel plates & protected by plastic covers. Maching spaces, L.C.A.B. or L.C.B.

chopped. Accommodation etc. L.C. shipped. 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

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Lloyd's Register
Foundation

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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

DESCRIPTION OF GENERATOR.	No. of	MAKER.	RATED AT				PRIME MOVER.	
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN ...	2.	W. H. Allen Spry	600	440	985	1800	St. Jacobs	W. H. Allen Spry & Co
	1	"	150	440	281	600	Oil Engine	" "
Auxiliary EMERGENCY ...	1	"	50	110	455	550	St. Engine	"
ROTARY TRANSFORMER	2.	"	50	110	455	1775	Ed. Motors	"

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (feet mls. round trip).	INSULATION.	PROTECTIVE COVERING.
		No. in Parallel per Pole.	Sectional Area or No. and Dia. of Sq. ins. or sq. mm.	In the Circuit.	Rails.			
MAIN GENERATOR	600	1	1.5	985	1414	100	V.C.	L. C. B. (Single Core)
" " Regulator	150	1	0.3	281	286	144	"	" (3 Cores)
Steam Engine driven Generator	50	1	.40	455	492	120 (+2)	"	"
" " " Equalizer		1	.20	-	314	60 "	"	"
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR	78 HP.	1	.10	102	141	75	"	(3 Cores)
" " " GENERATOR	50.	1	.40	455	492	150 (+2)	"	"
" " " Equalizer		1	.20	-	314	75 "	"	"

DESCRIPTION.										
230 V. A.C. Substation from Transformer.	1	20	189	220	60	V.C.	L.C.B.	13 cm		
440 V. A.C. Transformer from Main S.W.	1	06	100	100	60	"	"			
" " Four Board AM1. SI.	1	10	51.4	141	80	"	"			
AM2. SI	1	10	100.7	141	80	"	"			
AM3. SI	1	10	99.4	141	40	"	"			
AM4. SI.	1	10	111.5	141	55	"	"			
AM12 DI	1	10	141.5	141	80	"	"			
AM13. SI.	1	10	52.5	141	45	"	"			
AM1. SI. D1.	1	0225	26.8	56	36	"	L.C.A.B.			
AM1. SI. D3	1	0225	24.6	56	51	"	"			
AM2. SI. D1	1	0225	29.7	56	30	"	"			
AM3 SI. D.	1	0225	20.4	56	80	"	"			

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (feet 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.			
Galley Range.	1	.06	68.5	143	30	V.C.	L.C.B.
Stove Pan.	1	.0225	43.2	80	36	"	"
Water Boilers	1	.0225	58.7	80	24	"	"
Galley Floor Boards.	G6. S1.	.06	88.9	143	45	"	"
"	G7. D1	.0225	44.6	80	24	"	"
"	G4. D1	.0225	33.2	80	45	"	"
Hudship Ponting	DB: DA3 D1.	.0225	50.1	80	24	"	"
Machinery Space Lighting. Fuel R. DM1 S1.	1	.04	52.4	110	80	"	L.C.A.B.
Ventilation	" " DM4 S1.	.06	74	143	75	"	"
"	" " DM5 S1.	.10	72.9	202	165	"	L.C.
Boat Winding Off	" " DM6 D1.	.04	56	110	70	"	"
Machinery Space. Fly	" " DM7 J1	.04	52.7	110	10	"	L.C.A.B.
"	" " DM7 J1 S1	.04	52.	110	50	"	"
General Lighting Off	" " DM8 S1.	.04	95.2	110	105	"	L.C.
"	" " DM9 S1.	.04	94.4	110	90	"	"
Hudship Aux. D.C. Switchboard.	1.	.30	65	408	600	VC	L.C.A.B.
" " "	2	.30	200	408	600	"	"
Radiat. Equipment	1	.04	45	110	60	"	L.C.
Radio	1	.04	15	110	60	"	"
Boat Flood Lighting. Fuel R. DA3 S1.	1	.06	41	143	114	"	"
Navigation " General Lighting Hudship	DA8 S1.	.04	93	110	15	"	"
Ship Ventilation	DA10 D1	.04	100	110	9	"	"
General Lighting Hudship	DA9 S1	.04	83.6	110	15	"	"
Surgeboard Projector (Battery only)	1	.10	"	202	360	"	L.C. L.C.A.B.
Stone Connection 440V. AC.	1	.40	"	344	66	"	L.C.A.B.
" " D.C.	1	.50	"	572	66	"	"
Degreasing Pan. 16 Turns in Series, in 1st Pan with 16 Turns in Series in 2nd Pan	19/064		114.3	143	8000	VC	L.C.A.B.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.								
Slewing Gears.	2	55	1	.06	85	100	225	V.C.	L.C.A.B. (3 cms)	
Fixed Draught Fan.	2	70	1	.10	96	141	190	"	"	
Domestic F.W. Pump	1	1.5	1	.01	13.7	31	66	"	"	
Main Circulating Pump.	2	90	1	.10	122	141	103/135	"	"	
Shipping Pumps.	1	100	1	.10	118	141	48	"	"	
Vark Bleeding "	1	86	1	.10	110	141	60	"	"	
Water Extraction "	2	45	1	.06	60	100	70	"	"	
Refining Compressors	2	7	1	.0045	9.5	15	30	V.I.R	"	
" S.W. Circulating Pnt	1	1.5	1	.003	2.2	10	150	"	"	
Lub. Oil Pumps	2	2.5	1	.003	3.7	10	54/120	"	"	
Eng. Room Vark Fans	4	5.5	1	.003	8.2	10	75/100	"	"	
Boiler " "	2	5.5	1	.003	8.2	10	60	"	"	
Auto-Alternator Circ. Pumps	2	27	1	.0225	37	56	45	V.C.	"	
Hot Ridge Sanitary "	2	26	1	.0225	34	56	55	"	"	
Air. Pressure "	2	9.75	1	.01	13.3	31	45	V.I.R	"	
Combustion Control Compressor.	1	6	1	.003	9.3	10	60	"	"	
Evaporator Feed Pump.	2	5.5	1	.003	7.1	10	40	"	"	
O.F. Transfer "	1	23	1	.0225	35	56	24	V.C	"	
Forcast Lub. Oil "	2	29	1	.0225	40	56	60	"	"	
Aux Condenser Extraction "	1	25	1	.0225	34.5	56	45	"	"	
Small Alternator Compressor	1	17.5	1	.0225	27.5	56	105	"	"	
Gravel Service Pump	1	26	1	.0225	34	56	70	"	"	
Aux Condenser Circ	1	27	1	.0225	40	56	90	"	"	
Drain Tank "	1	4.5	1	.003	6.2	10	60	V.I.R	"	
Lub. Oil Cools. Cist	1	13	1	.0225	18	56	45	V.C	"	
Turning Motor (110V)	1	7	1	.04	58	110	45	"	"	
Wash (110V)	1	8.5	1	.04	71	110	160	"	"	
Boat Winch (110V)	4	5	1	.0225	43.3	80	45/75	"	"	
Hydrostatic Fans	2	2.5	1	.0225	21	56	89/2	"	L.C	
"	3	3.5	1	.01	28	31	30	V.I.R	"	
Exhaust Fans	1	.08	1	.003	0.6	10	75	"	"	
"	1	2.5	1	.01	21	31	30	"	"	
Supply Fan	2	0.75	1	.003	7.2	10	120/30	"	"	

The foregoing is a correct description

ELECTRICAL DEPT.
23 JUN 1952

Electrical Contractors.

Date.

COMPASSES.

Have the compasses been adjusted under working conditions.

Yes.

CAMMELL LAIRD & Co. LIMITED.

Syde

TECHNICAL MANAGER
SHIPBUILDING DEPT.

Builder's Signature

Date.

23 JUN 1952

Have the foregoing descriptions and schedules been verified and found correct

Чис.

Is this installation a duplicate of a previous case.

If so, state name of vessel.

BRITISH ADVENTURE

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

400

General Remarks. (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.)

The electrical equipment has been installed on board under special survey, in accordance with approved plans and the Rules for Electrical Equipment. The installation has been tested under full working conditions and found satisfactory. The materials and workmanship are good.

In my opinion this electrical equipment is eligible to be accepted for classification with this Society.

Total Capacity of Generators 1400. Kilowatts

The amount of Fee ...

£ 162 . 0

When applied for

Per London

...

London

125, 12, 0
2, 1, 0

When received,

Travelling Expenses (if any)

£ 9 : 4 : 2

19.....

Committee's Minute..

LIVERPOOL

6 AUG 1952

Assigned..

See minute on Rpt 4a

Surveyor to Lloyd's Register of Shipping.

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