

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office MAY 11 1939

Date of writing Report.....19..... When handed in at Local Office.....10/5/1939 Port of Newcastle
 No. in Survey held at Newcastle Date, First Survey 22/2/39 Last Survey 27 April 1939
 Reg. Book. Suppt. (Number of Visits.....8.....)
87815 on the M.V. "BRITISH INFLUENCE" Tons {Gross.....8431
 Net.....4855
 Built at Newcastle By whom built Swan, Hunter & Wigham Yard No. 1594 When built 1939
 Owners British Tanker Co. Ltd. Port belonging to London
 Electrical Installation fitted by The Sunderland & Fawcett Eng. Co. Ltd. Contract No. When fitted 1939
with materials supplied by Swan, Hunter & Wigham Richardson Ltd.
 Is vessel fitted for carrying Petroleum in-bulk Yes Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. Yes Sub.Sig. No

Have plans been submitted and approved Yes System of Distribution Single wire Voltage of supply for Lighting 110
 Heating..... Power 110 Direct Alternating Current, Lighting Yes Power Yes If Alternating Current state frequency..... Prime Movers,
 has the governing been tested and found efficient when the whole load is suddenly thrown on and off Yes Are turbine emergency governors fitted with a
 trip switch as per Rule..... Generators, are they compound wound Yes, are they level compounded under working conditions Yes,
 if not compound wound state distance between generators..... and from switchboard..... Where more than one generator is fitted are they
 arranged to run in parallel Yes, are shunt field regulators provided Yes Is the compound winding connected to the negative or positive pole
Positive 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 Are the lubricating arrangements and the construction
 of the generators as per rule Yes Position of Generators Engine room starboard side forward
 is the ventilation in way of generators satisfactory Yes are they clear of inflammable material Yes, if situated
 near unprotected combustible material state distance from same horizontally..... and vertically..... are the generators protected from mechanical
 injury and damage from water, steam and oil Yes, are the bedplates and frames earthed Yes and the prime movers and generators in metallic
 contact Yes Switchboards, where are main switchboards placed Engine room starboard side
forward on raised platform
 are they in accessible positions, free from inflammable gases and acid fumes Yes, are they protected from mechanical injury and damage from water, steam
 and oil Yes, if situated near unprotected combustible material state distance from same horizontally..... and vertically..... what insulation
 material is used for the panels Insulation, 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 frame effectually earthed Yes
 Is the construction as per Rule Yes, including accessibility of parts Yes, absence of fuses on the back of the board Yes, individual fuses
 to pilot and earth lamps, voltmeters, etc. Yes locking of screws and nuts Yes, labelling of apparatus and fuses Yes, fuses on the "dead"
 side of switches Yes Description of Main Switchgear for each generator and arrangement of equaliser switches Single pole circuit
breaker with O/L and R/C trips on each 30 kw. generator main, one
pole used for equaliser; double pole switch and double pole fuse on
and for each outgoing circuit. Double pole knife switch and double pole fuse
8 kw. generator main.
 Are compartments containing switchboards composed of fire-resisting material or lined as per Rule..... Instruments on main switchboard None
 ammeters Three voltmeters..... synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the
 equaliser connection Yes Earth Testing, state means provided 2. Lamps coupled to E. through res. fuses.



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Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an approved type Yes, are all fuses labelled as per Rule Yes, are the reversed current protection devices connected on the pole opposite to the equaliser connection Yes, have they been tested under working conditions Yes. Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule Yes. Cables, are they insulated and protected as per the appropriate Tables of the Rules Yes, if otherwise than as per Rule are they of an approved type Yes, state maximum fall of pressure between bus bars and any point under maximum load less than 0.04, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets Yes. Are paper insulated and varnished cambric insulated cables sealed at the exposed ends with insulating compound Yes or waterproof insulating tape 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 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 Yes. State how the cables are supported and protected L.C.A.B. cables clipped to surface or on transverse in machinery spaces and all other cables run in pipe work along fore and aft gangway; L.C.A.B. cables clipped to surface or wood grounds in accom. Are all lead sheaths, armouring and conduits effectually bonded and earthed Yes. Refrigerated chambers, are the cables and fittings as per Rule 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 and with what material Lead or zinc. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes. Emergency Supply, state position Battery fitted in engine room near switchboard and method of control Automatic on failure of engine room lighting. Navigation Lamps, are they separately wired Yes controlled by separate double pole switches Yes 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. Secondary Batteries, are they constructed and fitted as per Rule Yes, are they adequately ventilated Yes. Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof Yes. Are 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 "Artic" gaslight fittings installed in pump room top. and where are the controlling switches fitted in machinery accommodation, are all fittings suitably ventilated Yes. are all fittings and accessories constructed and installed as per Rule Yes. Searchlight Lamps, No. of One, whether fixed or portable Com. union fitted forward, are their fittings as per Rule Yes. 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 Yes and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil Yes, if situated near unprotected combustible material state minimum distance from same horizontally Yes and vertically 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 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 the cartridge type Yes. are they of an approved type Yes. If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flameproof type Yes. Spare Gear, if the vessel is for open sea service have spares been provided as per Rule Yes, are they suitably stored in dry situations Yes. Insulation Tests, has the insulation resistance of all circuits and apparatus been megger tested and found satisfactory Yes.

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	1	30	110	273		Single cyl. steam engine		
	1	30	110	273		4 cyl. diesel engine	Fuel Oil	Above 150°F
AUXILIARY	1	8	110	73.5	750	Single cyl. steam engine		
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands, or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATORS	2 x 30	1	64/193	273	288	70	V.I.R.	L.C.A.B.
" " EQUALISER		1	37/172	—	152	35	V.I.R.	L.C.A.B.
AUXILIARY GENERATOR	8	1	19/264	73.5	83	50	V.I.R.	L.C.A.B.
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

AUX. SWITCHBOARDS AND SECTION BOARDS ...								
Emergency Camel Propellers	1	19/252	60	64	880	V.I.R.	L.C.A.B.	
Exhaustions & Filter S.B. feed	1	7/264	38	46	170	V.I.R.	L.C.A.B.	
Crack Case Fan & P. Pump S.B. feed	1	7/264	30	46	60	V.I.R.	L.C.A.B.	
Thermotank S.B. App. & Machinery	1	19/252	40+20	64	1800	V.I.R.	L.C.A.B.	
Machinery Accom. S.B.	1	19/252	48	64	400	V.I.R.	L.C.A.B.	
Crew Accom. app. S.B.	1	19/252	48	64	180	V.I.R.	L.C.A.B.	
Engine Room S.B.	1	19/252	56	64	80	V.I.R.	L.C.A.B.	
Emergency S.B. (fed from above)	1	7/264	20	20	36	V.I.R.	L.C.A.B.	

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	7/264	15/20	46	430	V.I.R.	L.C.A.B.
NAVIGATION LIGHTS	1	7/264	10	31	480	V.I.R.	L.C.A.B.
LIGHTING AND HEATING							
Engine S.B. No. 1	1	7/236	8	24	25	V.I.R.	L.C.A.B.
Engine S.B. No. 2	1	7/236	15	24	20	V.I.R.	L.C.A.B.
Engine S.B. No. 3	1	7/236	15	24	50	V.I.R.	L.C.A.B.
Cargo S.B. No. 1	1	7/236	7	24	140	V.I.R.	L.C.A.B.
Crew Accom. S.B. No. 1	1	7/236	11	24	40	V.I.R.	L.C.A.B.
Crew Accom. S.B. No. 2	1	7/236	15	24	120	V.I.R.	L.C.A.B.
Crew Accom. S.B. No. 3	1	7/236	22	31	180	V.I.R.	L.C.A.B.
Eng. Room S.B. No. 1	1	7/236	20	31	120	V.I.R.	L.C.A.B.
Eng. Room S.B. No. 2	1	7/236	11	31	80	V.I.R.	L.C.A.B.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
Oil Exhausters	2	2	1	7/229	17.2	18.2	600	V.I.R. L.C.A.B.
Running Pump	1	1.5	1	7/229	13.5	18.2	50	V.I.R. L.C.A.B.
Crack Case Fan	1	2	1	7/229	16	18.2	130	V.I.R. L.C.A.B.
Trans. Oranged Fan	1	4.5	1	7/264	39	46	180	V.I.R. L.C.A.B.
Oil Filter	1	1/2	1	3/229	4	7.8	25	V.I.R. L.C.A.B.
Refining Motor	1	8	1	19/252	64	64	180	V.I.R. L.C.A.B.
Engine Room Crane	1	3	1	7/264	24	31	80	V.I.R. L.C.A.B.
Thermotank Fans Off.	4	1/4	1	7/229	10	18.2	40+180	V.I.R. L.C.A.B.
Thermotank Fans On.	2	1/4	1	7/229	10	18.2	80+90	V.I.R. L.C.A.B.
Wrenching Motor	1	3	1	7/264	24	31	130	V.I.R. L.C.A.B.
Accumulator Charging Bd.	—	—	1	7/229	5	18.2	220	V.I.R. L.C.A.B.



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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.

Stew *Sunderland Forge & Co Ltd* Electrical Engineers. Date *4-5-1939*
A. J. Gurney

SWAN, HUNTER, & WIGHAM RICHARDSON, LTD.
COMPASSES.

Minimum distance between electric generators or motors and standard compass *230 feet*

Minimum distance between electric generators or motors and steering compass *225 feet*

The nearest cables to the compasses are as follows:—

A cable carrying *1/2* Ampères *on the* feet from standard compass *10* feet from steering compass.

A cable carrying *1/2* Ampères *10* feet from standard compass *on the* feet from steering compass.

A cable carrying Ampères feet from standard compass feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power *Yes*

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted *Yes*

The maximum deviation due to electric currents was found to be *1/2* degrees on *every* course in the case of the

standard compass, and *1/2* degrees on *every* course in the case of the steering compass.

Stew Harrison Builder's Signature. Date *8th May 1939*

Is this installation a duplicate of a previous case *Yes* If so, state name of vessel *M.V. "British Gannet"*

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. The materials used and the workmanship are good. On completion the equipment was run under working conditions, the governing, compensating, regulation and paralleling of the 30 Kw. generator and the governing, compensating and regulation of the 8 Kw generator were tested, the operation of the overload and reverse current trips of the circuit breakers was checked, the insulation resistance of all circuits was measured and the spare gear was checked. This equipment is in my opinion suitable for a classed vessel carrying petroleum in bulk.*

Noted
L.Y.
19/5/39

Total Capacity of Generators *68* Kilowatts.

The amount of Fee ... *£29 : 6* : When applied for, *10 MAY 1939*

Travelling Expenses (if any) £ : : When received, *20 : 5 : 1939*

Santerson
Surveyor to Lloyd's Register of Shipping.

Committee's Minute *TUE 23 MAY 1939*

Assigned *See NWC. JE 97437*

(MADE IN ENGLAND.)
2m. 10. 38. Transfer.
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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