

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

20 OCT 1926

Date of writing Report 19<sup>th</sup> Oct 1926. Port of Newcastle-on-Tyne

No. in Survey held at Newcastle. Date, First Survey Aug. 25<sup>th</sup> Last Survey Oct. 6<sup>th</sup> 1926.  
Reg. Book. Suffix 8173 on the British Governmt. (Number of Visits 11)

Built at Newcastle. By whom built Swan Hunter & Wigham Richardson Yard No. 1218 When built 1926  
Tons { Gross 6936  
Net 4140

Owners British Tanker Co Ltd Port belonging to London

Electric Light Installation fitted by Swan Hunter & Wigham Richardson Contract No. 1218 When fitted 1926

System of Distribution Double wire ✓

Pressure of supply for Lighting 110 ✓ volts, Heating — volts, Power — volts.

Direct or Alternating Current, Lighting Direct ✓ Power —

If alternating current system, state frequency of periods per second —

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off Yes ✓

Generators, do they comply with the requirements regarding rating Yes ✓, are they compound wound Yes ✓

Are they over compounded 5 per cent. Yes ✓, if not compound wound state distance between each generator —

Where more than one generator is fitted are they arranged to run in parallel No, is an adjustable-regulating resistance fitted in series with each shunt field Yes

Are all terminals accessible, clearly marked, and furnished with sockets Yes, are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched Yes

Are the lubricating arrangements of the generators as per Rule Yes

Position of Generators Dynamo platform after end of engine room

Is the ventilation in way of the generators satisfactory Yes, are they clear of all inflammable material Yes

Are they situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators — and —, are the generators protected from mechanical injury and damage from water, steam or oil Yes

Are their axes of rotation fore and aft Yes

Earthing, are the bed-plates and frames of the generating plant efficiently earthed Yes, are the prime movers and their respective generators in metallic contact Yes

Main Switch Boards, where placed on dynamo platform at after end of engine room

If the generators and main switchboard are not placed in the same compartment, is each generator provided with fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard. —

Are the switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes Yes

Are they protected from mechanical injury and damage from water, steam or oil Yes, if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards. — and —

Are they constructed wholly of durable, non-ignitable non-absorbent materials Yes, is all insulation of high dielectric strength and of permanently high insulation resistance Yes

Are they insulated with mica or micamite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework Yes

Is the frame effectively earthed Yes. Are the fittings as per Rule regarding: — spacing or shielding of live parts Yes

Accessibility of all parts Yes, absence of fuses on back of board Yes, proportion of omnibus wires Yes

Are there individual fuses to voltmeter, pilot or earth lamp Yes, connections of switches Yes

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches Double pole

Change over switch & fuses for dynamo mains to feed each outgoing circuit

Instruments on main switchboard 2 ammeters 1 voltmeters — synchronising device for paralleling purposes.

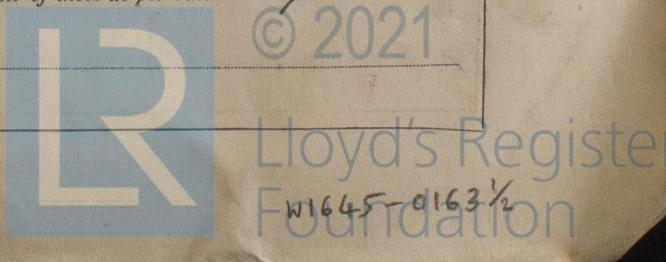
Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system earth lamps

Are they connected to earth through switches & fuses

Are switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules Yes

Point Boxes Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule Yes

Are cast iron fuse boxes fitted with "Led" type fuses.



**Cables:** Single, twin, concentric, or multicore single are the cables insulated and protected as per Tables IV or V of the Rules. Yes

**Fall of Pressure,** state maximum between bus bars and any point of the installation under maximum load 4 bolts

**Cable Sockets and other connections,** are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets Yes

**Paper Insulated Cables,** If cables are paper covered, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound —

**Cable Runs,** are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage Yes cables run in galvanised iron pipe under fore and aft gangway.

**Support and Protection of Cables,** state how the cables are supported and protected Lead covered braided cables run in galvanised iron pipe

If cables are run in wood casings, are the casings and caps secured by screws —, are the cap screws of brass —, are the cables run in separate grooves —. If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII Yes

**Refrigerated Chambers,** if lights are fitted, are the cables and fittings in accordance with the special requirements. Yes

**Joints in Cables,** state if any, and how made, insulated, and protected none made

**Watertight Glands and Deck Tubes,** are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands Yes

**Bushes in Beams and Non-watertight Partitions,** where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed Yes state the material of which the bushes are made lead

**Earthing Connections,** state what earthing connections are fitted and their respective sectional areas — are their connections made as per Rule —

**Alternative Lighting,** are the groups of lights in the propelling machinery space arranged as per Rule. Yes

**Emergency Supply,** state position and method of control of the emergency supply and how the generator is driven none fitted

**Navigation Lamps,** are these separately wired Yes, controlled by separate switch and separate fuses Yes, are the fuses double pole Yes, are the switches and fuses grouped in a position accessible only to the officers on watch Yes, has each navigation lamp an automatic indicator as per Rule Yes

**Secondary Batteries,** are they constructed and fitted as per Rule —

**Fittings,** are all fittings on weather decks, in stowholds and engine rooms and where exposed to drip or condensed moisture, watertight Yes, are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected none, are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected Yes, special gas-tight pump room fittings —, how are the cables led in galvanised iron pipe outside pump room, where are the controlling switches situated at distribution box.

**Searchlight Lamps,** No. of none, whether fixed or portable —, are their fittings as per Rule —

**Arc Lamps,** other than searchlight lamps, No. of —, are their live parts insulated from the frame or case —, are their fittings as per Rule —

**Motors,** are their working parts readily accessible —, are the coils self-contained and readily removable for replacement —, are the bushes, brush holders, terminals and lubricating arrangements as per Rule —, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material —, are they protected from mechanical injury and damage from water, steam or oil —, are their axes of rotation fore and aft —, if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type —, if not of this type, state distance of the combustible material horizontally or vertically above the motors — and —

**Control Gear and Resistances,** are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule —

**Lightning Conductors,** where lightning conductors are required, are these fitted as per Rule Yes

**Ships carrying Oil having a Flash Point less than 150° F.** Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings. Yes

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office 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	2	10	110	90.9	430	Steam engine		
AUXILIARY								
EMERGENCY								
ROTARY TRANSFORMER								

LIGHTING AND HEATING CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	MAIN GENERATOR...	2	.07892	19	.072	91	50	V. I. R	Lead covered armoured
	EQUALISER CONNECTIONS								
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM	2	.02214	17	.064	32.7	180	50	50
	BOILER ROOM								
	ACCOMMODATION ..aft	2	.02214	17	.064	24.0	200	50	50
	acc' midship	2	.07892	19	.072	53	660	50	Lead covered armoured
	WIRELESS	2	.02214	17	.064	15	680	50	50
	SEARCHLIGHT								
	MASTHEAD LIGHT...	2	.00194	3	.029	.9	420	50	50
	SIDE LIGHTS	2	.00194	3	.029	.9	60	50	50
	COMPASS LIGHTS	2	.00194	3	.029	.25	70	50	Lead covered
	DECK LIGHTS	2	.00194	3	.029	.9	700	50	Lead covered armoured
	CARGO LIGHTS	2	.00194	3	.029	1.9	80	50	Cable type flexible
	ARC LAMPS								
	HEATERS								

MOTOR CONDUCTORS.

Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND.		Total Maximum Current. Amperes.	Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
				No.	Diameter.				
	BALLAST PUMP								
	MAIN BILGE LINE PUMPS								
	GENERAL SERVICE PUMP								
	EMERGENCY BILGE PUMP								
	SANITARY PUMP								
	CIRC. SEA WATER PUMPS								
	CIRC. FRESH WATER PUMPS								
	AIR COMPRESSOR								
	FRESH WATER PUMP								
	ENGINE TURNING GEAR								
	ENGINE REVERSING GEAR								
	LUBRICATING OIL PUMPS								
	OIL FUEL TRANSFER PUMP								
	WINDLASS								
	WINCHES, FORWARD								
	WINCHES, AFT								
	STEERING GEAR								
	(a) MOTOR GENERATOR								
	(b) MAIN MOTOR								
	WORKSHOP MOTOR								
	VENTILATING FANS								

All Conductors are of annealed copper conforming to British Standard Specification No. 7.  
 The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.  
 The foregoing is a correct description.

*Swan Hunter Wigham Richardson* Electrical Engineers. Date *16/10/26*

COMPASSES.

Distance between electric generators or motors and standard compass *250 feet*  
 Distance between electric generators or motors and steering compass *50 feet.*  
 The nearest cables to the compasses are as follows:—  
 A cable carrying *.25* Ampères *9* feet from standard compass *on the ~~steering~~ steering compass.*  
 A cable carrying *5.0* Ampères *10* feet from standard compass *10* feet from steering compass.  
 A cable carrying *.25* Ampères *on the ~~standard~~ standard compass* *9* 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 *nil* degrees on *each* course in the case of the standard compass, and *nil* degrees on *each* course in the case of the steering compass.

FOR SWAN, HUNTER & WIGHAM RICHARDSON, LTD.

*G. J. Stuey* Builder's Signature. Date *16 October 1926*  
 DIRECTOR.

Is this installation a duplicate of a previous case *no* If so, state name of vessel \_\_\_\_\_

General Remarks (State quality of workmanship, opinions as to class, &c. \_\_\_\_\_)

*The above installation is in accordance with the Society's Rules. The vessel is eligible in my opinion for notation elec light, wireless*

It is submitted that this vessel is eligible for THE RECORD. Elec. light.

*W.D.*  
*20/10/26*

Total Capacity of Generators *20* Kilowatts.

The amount of Fee ... £ *17:10* :  
 Travelling Expenses (if any) £ : :  
 When applied for, *1926*  
 When received, *20-10-26*  
*W.T. Badger*  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 22 OCT 1926*

Assigned *Elec Light*

Im.1.23.—Transfer.  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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