

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

22 AUG 1930

Received at London Office.....

Date of writing Report 20:8:1930 When handed in at Local Office 21 Aug 1930 Port of Hull.

No. in Survey held at Knottingley Date, First Survey 30 June Last Survey 20 Aug 1930
Reg. Book. (Number of Visits 3)

74777 on the Steel Single Screw "JOHN HARKER" Tons { Gross 142.78
Net 70.20

Built at Knottingley By whom built Messrs John Harker & Co. No. 34 When built 1930

Owners John Harker Ltd Port belonging to Hull.

Electric Light Installation fitted by G.A. Rex J. Keighley Contract No. ✓ When fitted 1930.

Is the Vessel fitted for carrying Petroleum in bulk yes.

System of Distribution Two wires

Pressure of supply for Lighting 50 volts, Heating 100 volts, Power 100 volts.

Direct or Alternating Current, Lighting DC Power D.C.

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 one generator only.

Where more than one generator is fitted are they arranged to run in parallel ✓, 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 Totally enclosed Are the lubricating arrangements of the generators as per Rule yes

Position of Generators In engine room

is the ventilation in way of the generators satisfactory yes, are they clear of all inflammable material yes

if 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 in same compartment

are their axes of rotation fore and aft yes.

Earthing, are the bedplates 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 totally enclosed (In E.R.)

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

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

if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework yes.

and 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 ✓, proportion of omnibus bars ✓

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

Generator & all out going circuits protected by double pole switches & fuses

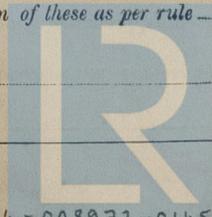
Instruments on main switchboard ✓ ammeters Two voltmeters one synchronising device for paralleling purposes.

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

earth indicating lamps.

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules. yes

Joint Boxes Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule yes.



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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 lighting 2 1/2 V Power 3 1/2 V.

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 none.

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.

Support and Protection of Cables, state how the cables are supported and protected lead covered cables in seamless steel tubes.

If cables are run in wood casings, are the casings and caps secured by screws none, 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 ✓.

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements none.

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

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 ✓ state the material of which the bushes are made ✓.

Earthing Connections, state what earthing connections are fitted and their respective sectional areas all circuits earthed with 01 sq in sectional area copper conductors. are their connections made as per Rule yes.

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 Required.

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 yes.

Fittings, are all fittings on weather decks, in alokholds and engine rooms and wherever 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 light in pumps Room contained in gas tight fitting & the wiring enclosed in gas tight tubes, how are the cables led in gas tight tubes where are the controlling switches situated in wheel house.

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 yes, are the coils self-contained and readily removable for replacement yes, are the brushes, brush holders, terminals and lubricating arrangements as per Rule yes, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material yes separated from pump by gas tight Bulkhead, are they protected from mechanical injury and damage from water, steam or oil ✓ are their axes of rotation fore and aft ✓ only used for discharging cargo 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 flame proof, 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 none.

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	6	100	60	800	Diesel Engine	Diesel oil	180 (approx)
AUXILIARY ...								
EMERGENCY ...								
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT AMPERES.		Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
MAIN GENERATOR ...									
EQUALISER CONNECTIONS	1	03960	19	05	6.0	6.4	20	V.I. Rubber lead covered in tubing association grade	
AUXILIARY GENERATOR ...									
EMERGENCY GENERATOR									
ROTARY MOTOR TRANSFORMER GENERATOR...									
ENGINE ROOM...	2	00388	3	029	1	7.8	80	V.I. Rubber lead covered in tubing	
BOILER ROOM...									
AUXILIARY SWITCHBOARDS ...	1	03960	19	05	6.0	6.4	20	V.I. Rubber lead covered in tubing association grade	
ACCOMMODATION ...	2	00388	3	029	3	7.8	180		
booker	1	02214	7	064	4.5	5.6	160	V.I.R. lead covered	
WIRELESS ...									
SEARCHLIGHT ...	1	00194	3	029	1	7.8	180	V.I.R. lead covered in tubing	
MASTHEAD LIGHT ...	2	00388	3	029	1	7.8	80	V.I.R. "	
SIDE LIGHTS ...	1	00194	3	029	1	7.8	30	V.I.R. "	
COMPASS LIGHTS ...	1	00194	3	029	1	7.8	100	V.I.R. "	
POOP LIGHTS ...									
CARGO LIGHTS ...									
ARC LAMPS ...	3	00897	3	036	6	12	180	V.I.R.	
HEATERS ...									

MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT AMPERES.		Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
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 ...										
Garage pump	1	1	00214	7	064	4.5	5.6	60	V.I.R. lead covered.	

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.

B. A. Peir (Keighley) Electrical Engineers.

Date *16 July 1930*

COMPASSES.

Distance between electric generators or motors and standard compass *Six feet Steel Bulkhead intervening*

Distance between electric generators or motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying Ampères *6* feet from standard compass *one* feet from steering compass. *for compass light*

A cable carrying Ampères *6* feet from standard compass *one* feet from steering compass. *" telegraph "*

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 *no* degrees on *any* course in the case of the standard compass, and *no* degrees on *any* course in the case of the steering compass.

For. John Harker Ltd.
E. K. Thirkettle Builder's Signature. Date *July 28/30*
Manager.

Is this installation a duplicate of a previous case *yes* If so, state name of vessel *William Kipping*

General Remarks (State quality of workmanship, opinions as to class, &c. *The electrical installation*)

If this vessel has been fitted on board under special survey the materials & workmanship are good. It has been tried under full working conditions & found in good order & is eligible in my opinion to have record of "Electric Light"

It is submitted that this vessel is eligible for THE RECORD. Elec. Light
W.H. 25/8/30

Total Capacity of Generators *6* Kilowatts.

The amount of Fee ... £ *6 : 0 :* When applied for, *21 Aug 1930* *W. H. Waggott*
Travelling Expenses (if any) £ : : When received, *1. 9. 30* *Surveyor to Lloyd's Register of Shipping.*

Committee's Minute *TUE. 9 SEP 1930* *TUE. 11 NOV 1930*

Assigned *See Minute on F.E. Rpt Hull No 41132*

Im. 1223. — Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)

