

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

15 AUG 1932

Date of writing Report

19

When handed in at Local Office

4/8/32

Port of **NEWCASTLE-ON-TYNE**No. in Survey held at **NEWCASTLE ON TYNE**Date, First Survey **13 Nov / 31** Last Survey **12 July** 1932

Reg. Book.

(Number of Visits.....)

on the **SS. HARLESDEN**Tons { Gross
NetBuilt at **NEWCASTLE ON TYNE** By whom built **HAWTHORN LESLIE & CO LTD** Yard No. **586** When built **1932**Owners **NATIONAL S.S. CO LTD** Port belonging to **LONDON**Electric Light Installation fitted by **HAWTHORN LESLIE & CO LTD** Contract No. **586** When fitted **1932**Is the Vessel fitted for carrying Petroleum in bulk **No.**

System of Distribution

Double WirePressure of supply for Lighting **110** volts, Heating **—** volts, Power **110** volts.

Direct or Alternating Current, Lighting

Direct

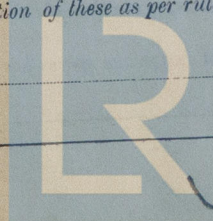
Power

DirectIf 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 **—**, 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**

Position of Generators

Engine Room Starboard side.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 **yes**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 andtheir respective generators in metallic contact **yes**

Main Switch Boards, where placed

Engine Room, Starboard side.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 unprotectedwoodwork 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 ofpermanently high insulation resistance **yes**, if semi-insulating material is used, are all conducting parts insulated from the slabwith 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 **yes**, proportion of omnibusbars **yes**, 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 **D.P. switch and****fuses for generator. S.P. switch and D.P. fuses for each outgoing circuit.**Instruments on main switchboard **1** 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****connected to earth through switches and fuses.**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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W405-0253(1/2)

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. volts.

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

Support and Protection of Cables, state how the cables are supported and protected main:- V.I.R in galvanised iron pipes.

Accommodation:- L.C. clipped up. Machinery space:- L.C. or A. cables clipped up.

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 —

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 stokeholds 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 —

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected —

—, how are the cables led —

where are the controlling switches situated —

Searchlight Lamps, No. of —, whether fixed or portable —, are their fittings as per Rule —

Are 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

are they protected from mechanical injury and damage from water, steam or oil Yes are their axes of rotation fore and aft Yes

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 Yes

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

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 —

If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office —

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amperes.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ...	1	14	110	127	600	S.C. Steam Engine.		
AUXILIARY ...								
EMERGENCY ...								
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		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 ...	1	0.11680	27	.064	127	130	50	V.I.R	L.C. & A.
EQUALISER CONNECTIONS ...									
AUXILIARY GENERATOR ...									
EMERGENCY GENERATOR ...									
ROTARY TRANSFORMER MOTOR ...									
ENGINE ROOM ...	1	0.00455	7	.029	11	18.2	24	do	do do
BOILER ROOM ...	1	0.00455	7	.029	11	18.2	60	do	do do
AUXILIARY SWITCHBOARDS ...									
ACCOMMODATION <u>Aft.</u> ...	1	0.01046	7	.044	9.5	31	450	do	Galv. Iron Pipe
<u>Navigation</u> ...	1	0.03960	19	.052	33.3	64	150	do	do do
<u>Navigation</u> ...	1	0.03455	7	.029	1.9	18.2	400	do	do do
WIRELESS ...	1	0.01046	7	.044	21	31	400	do	do do
SEARCHLIGHT ...	1	0.00194	3	.029	.36	7.8	260	do	do do
MASTHEAD LIGHT ...	1	0.00194	3	.029	.36	7.8	90	do	L.C.
SIDE LIGHTS ...	1	0.00194	3	.029	.09	7.8	30	do	do
COMPASS LIGHTS ...	1	0.00194	3	.029	.36	7.8	640	do	Galv. Iron Pipe.
STEERING LIGHT ...	1	0.02214	7	.064	20.2	46	150	do	do do
CARGO LIGHTS ...	1	0.03960	19	.052	20.2	64	330	do	do do
ARE LAMPS ...	1	0.03960	19	.052	20.2	64	330	do	do do
HEATERS ...									

MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		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 ...										
Refrig. Compressor Motor ...	1	1	0.02214	7	.064	24	46	380	V.I.R	Galv. Iron Pipe
do Circ. Pump Motor ...	1	1	0.02214	7	.064	8	46	450	do	do do

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.

FOR R. & W. HAWTHORN, LESLIE & CO. LIMITED.

Electrical Engineers.

Date 2nd August 1932

COMPASSES.

Distance between electric generators ~~or motors~~ and standard compass 40 feet approx.

Distance between electric generators ~~or motors~~ and steering compass 32 feet approx.

The nearest cables to the compasses are as follows:—

A cable carrying .09 Ampères in the feet from standard compass 8 feet from steering compass.

A cable carrying .09 Ampères 8 feet from standard compass in 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 nil degrees on all course in the case of the standard

compass, and nil degrees on all course in the case of the steering compass.

FOR R. & W. HAWTHORN, LESLIE & CO. LIMITED.

Builder's Signature.

Builder's Signature.

Date 2nd August 1932

Is this installation a duplicate of a previous case. Yes. If so, state name of vessel S.S. HARPALION.

General Remarks (State quality of workmanship, opinions as to class, &c.) This installation has been fitted on

board under special survey and has been tested under full working conditions and found satisfactory.

The materials and workmanship have been found to be good and sound.

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

Elec. Dept.
23/8/32.

Total Capacity of Generators 14 Kilowatts.

The amount of Fee ... £ 14 : -

Travelling Expenses (if any) £ : : 28.7.19.32

R. C. Clayton.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

1m, 9, 30.—Transfer.
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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