

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) -1 MAY 1929
Received at London Office.....

Date of writing Report

10

When handed in at Local Office

10

Port of *Belfast.*

No. in Survey held at

Belfast.

Date, First Survey

17th Jan

Last Survey

19th Apr

1929

(Number of Visits.....)

Reg. Book.

on the

Steel Twin Screw "HIGHLAND BRIGADE."

Tons

Gross 14450.

Net

Built at

Belfast.

By whom built

*Harland & Wolff, Ltd.*Yard No. *812*When built *1928-9.*

Owners

Nelson Steam Navigation Co. (H.W. Nelson Ltd. Mgrs)

Port belonging to

Belfast.

Electric Light Installation fitted by

*Harland & Wolff Ltd.*Contract No. *812*When fitted *1928-9.*System of Distribution *Two main, Direct Current to Distributing Boxes.*Pressure of supply for Lighting *220* volts, Heating *220* volts, Power *220* volts.Direct or Alternating Current, Lighting *Direct* Power *Direct.*

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 generatorWhere more than one generator is fitted are they arranged to run in parallel *yes*, 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 *Main generators in Motor Room. Port & Starboard. Emergency generators in House on Boat Deck*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 *yes*, are the generators protected from mechanical injury and damage from water, steam or oil *yes*are their axes of rotation fore and aft *yes* are the prime movers andEarthing, are the bedplates and frames of the generating plant efficiently earthed *yes*

their respective generators in metallic contact

Main Switch Boards, where placed *On Switchboard Platform. Fore end of Motor Room.*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 *yes*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 *yes* and *yes*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. Overload Circuit Breaker**with reverse current, time limits & interlocked equalizer switches for each generator.**D.P. Overload Circuit Breakers or D.P. Switches & Fuses for each outgoing circuits*Instruments on main switchboard *7* ammeters *2* voltmeters *Arranged* 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.*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*

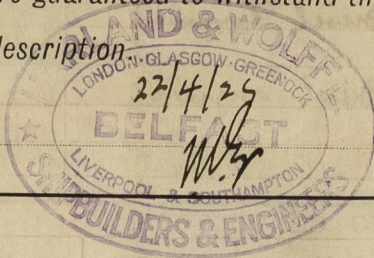
If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office

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	1	0.06	19	.064	77	108	Rubber	Lead Covered.
	MAIN BILGE LINE PUMPS ...	2	0.04	19	.052	51	177	"	" "
	GENERAL SERVICE PUMP								
	EMERGENCY BILGE PUMP ...	1	0.075	19	.072	88	591	"	" "
	SANITARY PUMP	1	0.1	19	.083	111	180	"	" "
	CIRC. SEA WATER PUMPS ...	4	0.12	37	.064	122	110	"	" "
	CIRC. FRESH WATER PUMPS	2	0.06	19	.064	68	330	"	" "
	AIR COMPRESSOR								
	FRESH WATER PUMP	1	0.007	7	.036	18.5	189.	"	" "
	ENGINE TURNING GEAR ...	2	0.04	19	.052	58.	300	"	" "
	ENGINE REVERSING GEAR ...								
	LUBRICATING OIL PUMPS ...	4	0.25	37	.093	190	450	"	" "
	OIL FUEL TRANSFER PUMP	2	0.04	19	.052	48	240	"	" "
	WINDLASS	1	0.3	37	.103	330	315	"	" "
	WINCHES, 12x3 12x3	3	0.1	19	.083	130	170	"	" "
	WINCHES, 4,5,6,7,8,9 4,5,6,7,8,9	6	0.06	19	.064	94	210	"	" "
	STEERING GEAR	2	0.3	37	.103	230	750.	"	" "
	(a) Motor Generator								
	(b) Main Motor								
	WORKSHOP MOTOR	5	0.003	3	.036	10	50	"	" "
	VENTILATING FANS	4	0.01	7	.044	28	180	"	" "
	WINCHES. 10, 11, 12	3	0.06	19	.064	94	450	"	" "
	" 13, 14, 15	3	0.06	19	.064	94	210	"	" "
	" 16, 17, 18.	3	0.06	19	.064	94	570	"	" "
	VENTILATION FANS.	2	0.04	19	.052	57	210	"	" "
	" "	4	0.003	3	.036	10	120.	"	" "

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



Electrical Engineers.

Date 22nd April 1929

COMPASSES.

Distance between electric generators or motors and standard compass 160 feet to generators. 22 feet to nearest motor.

Distance between electric generators or motors and steering compass 156 feet to generators. 18 feet to nearest motor.

The nearest cables to the compasses are as follows:—

A cable carrying 39 Ampères 16 feet from standard compass 14 feet from steering compass.

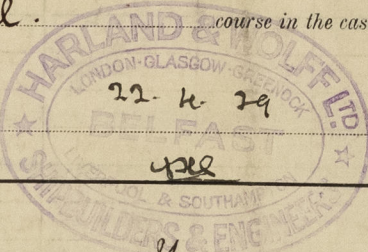
A cable carrying 32 Ampères 16 feet from standard compass 14 feet from steering compass.

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.



Builder's Signature.

Date 22-4-29

Is this installation a duplicate of a previous case. Yes If so, state name of vessel "Highland Monarch" "Highland Chieftain"

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

This work has been done under special survey. The materials and workmanship are sound and good. The installation has been tried out under full working conditions with satisfactory results. In my opinion the vessel is eligible for notation "Electric Light"

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

JRM

2.5.29.

Total Capacity of Generators 900 Kilowatts.

The amount of Fee ... £ 54- : When applied for, 30 April 1929

Travelling Expenses (if any) £ : When received, 9.5.29

R Lee Amess.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 7 MAY 1929

Assigned

Elec. Light



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Lloyd's Register
Foundation