

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

25 AUG 1926

Received at London Office

Date of writing Report

When handed in at Local Office

No. 8

to Port of

Belfast

No. in Survey held at  
Reg. Book.

New Steel Yacht "Acera"

Date, First Survey 16<sup>th</sup> June Last Survey 6<sup>th</sup> Aug 1926

(Number of Visits 12)

Tons { Gross

Net

Built at Belfast

By whom built Harland & Wolff Ltd Yard No. 616 When built 1926

Owners Elder Dempster & Sons Ltd

Port belonging to

Liverpool

Electric Light Installation fitted by Harland & Wolff Ltd

Contract No. 616 When fitted 1926

System of Distribution

Two wire direct current to distribution 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 overload

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

Yes ✓ , is an adjustable regulating resistance fitted in

series with each shunt field

Yes ✓

Are all terminals accessible and clearly marked

Yes ✓ , are they so spaced or shielded that they cannot be accidentally earthed,

or short circuited

Yes ✓ Are the lubricating arrangements of the generators as per Rule

Yes ✓

Position of Generators

Main Generators in Motor Room forward ✓ Emergency Generator in Emergency Dynamo House Upper Deck Aft ✓

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 axis 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

on Platform forward 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

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, incombustible 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 connected to one pole

insulated from the slab with mica or micanite and the slab similarly insulated from its framework

Yes ✓ , and is the

frame effectively earthed

Yes ✓ . Are the following fittings as per Rule, viz.:— spacing or shielding of live parts

bars Yes ✓ , accessibility of all parts

Yes ✓ , absence of fuses on back of board

Yes ✓ , proportion of omnibus

bars 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 + Reverse

current circuit breaker with time limits & interlocked equaliser switch for each generator

D.P. overload circuit breaker or S.P. switch & D.P. fuses for each outgoing circuit

Instruments on main switchboard 13 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 ✓

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

Yes ✓



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Lloyd's Register  
Foundation

w324-0040

**Insulation of Cables**, state type of cables, single or twin **single** ✓ are the cables insulated and protected as per Tables III or IV of the Rules **yes** ✓

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

**Cable Sockets and other connections**, are the ends of all cables having a sectional area of 0.007 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 **no**

**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 **Waterproof Type Hard Rubber**  
**Cables Run on Platting in Accommodation** **Lead covered in Motor Room**

If cables are run in wood casings, are the casings and caps secured by screws **yes** ✓, are the cap screws of brass **yes** ✓, are the cables run in separate grooves **yes** ✓. If armoured and lead-covered cables are secured by metal clips, are the clips spaced as per Table VI **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 **Junction Boxes used for all joints**

**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 Positions**, 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 **etc portable fittings, sockets etc not fitted to steelwork of ship are earthed with connection equivalent to working conductor** ✓, 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 **Emergency Dynamo Rm upper deck control from Emergency switchboard fitted in same room**  
**Dynamo Direct coupled to Diesel Engine**

**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** ✓, are separate screens provided for the use of oil and electric side lights **yes** ✓, are separate oil lanterns provided for the mast head lights and side lights **yes** ✓

**Fittings**, are all fittings on weather decks, in stowage 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 **Cast iron**, **fittings**, 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 **—**

**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** ✓, are they protected from mechanical injury and damage from water, steam or oil **yes** ✓, are their axis of rotation fore and aft **yes Except Vertical Motors**, 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 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.	Ampères.	Revs. per Min.	Fuel Used.	Flash Point of Fuel.
MAIN	3	200 ✓	220	910	200	Diesel Engine	Diesel
AUXILIARY	1	50 ✓	220	227	400	Diesel Engine	Oil
EMERGENCY							
ROTARY TRANSFORMER							

LIGHTING AND HEATING CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Conductors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND. No. Diameter.	Total Maximum Current Ampères.	Approximate Length (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.	
MAIN GENERATOR...	6 pole	75	91	103	910	90	Rubber	Lead Covered	
AUXILIARY GENERATOR	2	3	37	103	227	40	"	"	
EMERGENCY GENERATOR	2	3	37	103	227	40	"	"	
ROTARY TRANSFORMER...	—							"	
AUXILIARY SWITCHBOARDS	2	25	37	093	226	420	"	Hard Rubber	
MOTOR ROOM	2	75	91	103	460	225	"	Lead Covered	
MOTOR ROOM	2	75	91	103	445	180	"	"	
WIRELESS	2	01	7	044	11	330	"	Hard Rubber	
SEARCHLIGHT	—	—	—	—	—	"	"	"	
MASTHEAD LIGHT	2	003	3	056	5	780	"	"	
SIDE-LIGHTS	2	003	3	056	5	120	"	Lead Covered	
COMPASS LIGHTS	2	003	3	056	5	120	"	"	
POOP LIGHTS	2	0145	7	052	25	1020	"	Hard Rubber	
CARGO LIGHTS	—	—	—	—	—	"	"	"	
ARC LAMPS	—	—	—	—	—	"	"	"	
HEATERS	—	—	—	—	—	"	"	"	

MOTOR CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Motors.	Effective Area of each Conductor. Sq. Ins.	COMPOSITION OF STRAND. No. Diameter.	Total Maximum Current Ampères.	Approximate Length (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.	
BALLAST PUMP	1	06	19	064	80	50	Rubber	Lead Covered	
MAIN BILGE LINE PUMPS	2	04	19	082	48	50	"	"	
FIRE SERVICE PUMP	1	1	19	083	112	200	"	Lead Covered A & B	
EMERGENCY BILGE PUMP	1	06	19	064	72	340	"	Lead Covered	
SANITARY PUMP	2	06	19	064	72	180	"	Lead Covered	
CIRC. SEA WATER PUMPS	4	06	19	064	74	140	"	"	
CIRC. FRESH WATER PUMPS	2	04	19	052	62	100	"	"	
AIR COMPRESSOR	2	6	91	095	480	230	"	"	
FRESH WATER PUMP	1	007	7	036	18	80	"	"	
ENGINE TURNING GEAR	2	0225	7	064	40	165	"	"	
ENGINE REVERSING GEAR	—							"	
LUBRICATING OIL PUMPS	4	2	37	083	180	140	"	"	
OIL FUEL TRANSFER PUMPS	2	0145	7	052	32	360	"	Hard Rubber	
WINDLASS	1	2	37	083	220	375	"	"	
WINCHES, FORWARD	2	1	19	083	130	105	"	"	
STEERING GEAR	2	2	37	083	180	650	"	"	
WORKSHOP MOTOR	2	003	3	036	8	160	"	Lead Covered	
VENTILATING FANS	{ 19	003	3	036	12	300	"	Hard Rubber	
WHEELS AFT	4	01	19	044	30	330	"	Lead Covered	
Boat Dk.	2	0225	7	064	40	200	"	Hard Rubber	
								"	

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 18/8/26

COMPASSES.

Distance between electric generators or motors and standard compass 100 ft to generators 30 ft nearest motor

Distance between electric generators or motors and steering compass 97 " " 31 "

The nearest cables to the compasses are as follows :—

A cable carrying 26 Ampères 6 feet from standard compass 6 feet from steering compass ✓

A cable carrying 27 Ampères 33 feet from standard compass 32 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.

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

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.)

This installation has been fitted in accordance with the rules & under special survey. The materials & workman ship are good and the tests under working conditions and overload were satisfactory.

The vessel is entitled in my opinion to have notation "Electric light".

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

H.  
25/8/26

Total Capacity of Generators 650 Kilowatts

See 1<sup>st</sup> Entry repair When applied for,  
The amount of Fee £ machinery 19  
Travelling Expenses (if any) £ : : When received, 19

W. Butler per A.P.S.

Surveyor to Lloyd's Register of Shipping.