

# REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London office 14 FEB 1931

Date of writing Report JAN. 15<sup>th</sup> 1931 When handed in at Local Office JAN. 15<sup>th</sup> 1931 Port of PHILADELPHIA

No. in Survey held at CHESTER, PA. Date, First Survey NOV. 14<sup>th</sup> Last Survey DEC. 27<sup>th</sup> 1930.  
Reg. Book. (Number of Visits.....)

on the S.S. COMET Tons { Gross 9153  
Not 5583.

Built at CHESTER. By whom built SUN S. B. & D. D. CO. Yard No. 128 When built 1930.

Owners STANDARD TRANSPORTATION CO. Port belonging to NEW YORK.

Electric Light Installation fitted by SUN S. B. & D. D. CO. Contract No. 128 When fitted 1930.

Is the Vessel fitted for carrying Petroleum in bulk YES. ✓

System of Distribution TWO WIRE ✓

Pressure of supply for Lighting 115 ✓ volts, Heating — volts, Power 115 ✓ 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 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, 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 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 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 and

their respective generators in metallic contact YES.

Main Switch Boards, where placed ENGINE ROOM FLAT NEAR GENERATORS.

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. IN SAME SPACE

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 SLATE PANEL.

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 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 EACH GENERATOR

HAS A 3-POLE FUSED LINE SWITCH, THE MIDDLE POLE IS USED FOR EQUALIZER, EACH

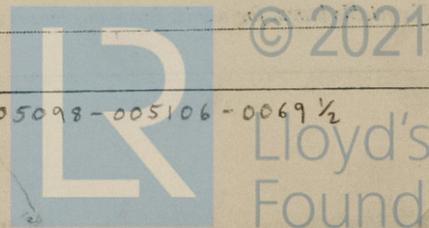
OUTGOING CIRCUIT HAS A 2-POLE FUSED KNIFE SWITCH.

Instruments on main switchboard 3 ammeters 2 voltmeters 1 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 GROUND 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.



Cables: Single, twin, concentric, or multicore TWIN 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 2%

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 ALL MAIN CABLES ARE CARRIED EITHER IN GALV. CONDUIT OR RUN ON HEAVY STEEL PANS.

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 JOINTS WHERE REQUIRED ARE MADE IN HEAVY BRASS JUNCTION BOXES.

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 2-WIRE SYSTEM.

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 TELL-TALE PANEL LOCATED IN WHEELHOUSE, has each navigation lamp an automatic indicator as per Rule YES.

Secondary Batteries, are they constructed and fitted as per Rule NONE.

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 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 —, how are the cables led

where are the controlling switches situated —

Searchlight Lamps, No. of 1-1000 WATT, whether fixed or portable PORTABLE, are their fittings as per Rule YES.

Arc Lamps, other than searchlight lamps, No. of NONE, 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 NONE, 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 MAST STAYS ARE ALL GROUNDED.

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	WHEEL DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amperes.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	1	20	110	173	450	G.E. STEAM ENGINE		
AUXILIARY	1	20	110	173	450	" " "		
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	1	0.196	37	.083	173	184	30	RUBBER	CONDUIT
EQUALISER CONNECTIONS	1	0.196	37	.083	—	184	30	"	"
AUXILIARY GENERATOR	1	0.196	37	.083	173	184	30	"	"
EMERGENCY GENERATOR	—								
ROTARY TRANSFORMER MOTOR GENERATOR	—								
ENGINE ROOM	1	.047	37	.040	60	64	20	"	"
BOILER ROOM	—								
AUXILIARY SWITCHBOARDS	—								
QUARTERS FORD.	1	.0306	19	.045	40	53	425	"	"
" AFT.	1	.047	37	.040	60	64	210	"	"
DECK & FORECASTLE PUMP ROOM	1	.007	7	.036	20	24	430	"	"
	1	.007	7	.036	20	24	400	"	"
ACCOMMODATION	—								
GYRO. COMPASS.	1	.007	7	.036	6	24	400	"	"
WIRELESS	1	.0179	7	.057	20	37	400	"	"
SEARCHLIGHT	1	.007	7	.036	9	24	600	"	"
MASTHEAD LIGHT	1	.0035	7	.025	5	12	250	"	"
SIDE LIGHTS	1	.0035	7	.025	5	12	60	"	"
COMPASS LIGHTS	1	.0035	7	.025	5	12	30	"	"
POOP LIGHTS	1	.0035	7	.025	6	12	110	"	"
CARGO LIGHTS	—								
ARC LAMPS	—								
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	1	1	.047	37	.040	60	64	60	RUBBER	CONDUIT
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.

*T. M. Jacobson*

Electrical Engineers.

Date *Jan. 22-1931*

**COMPASSES.**

Distance between electric generators or motors and standard compass *300 FT.*

Distance between electric generators or motors and steering compass *300 "*

The nearest cables to the compasses are as follows:—

A cable carrying *5* Ampères *2* feet from standard compass *2* feet from steering compass.

A cable carrying *3* Ampères *5* feet from standard compass *8* feet from steering compass.

A cable carrying *1* Ampères *6* feet from standard compass *10* 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 \_\_\_\_\_ degrees on \_\_\_\_\_ course in the case of the standard compass, and \_\_\_\_\_ degrees on \_\_\_\_\_ course in the case of the steering compass.

*R. L. Burke*  
*via Bus.*

Builder's Signature.

Date *Jan 22-1931.*

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 ON BOARD IN A SATISFACTORY MANNER, THE MATERIALS AND WORKMANSHIP ARE OF GOOD DESCRIPTION, IT WAS TRIED OUT WITH ALL LIGHTS ON AND FOUND SATISFACTORY.*

*Elect. Light*  
*J. A. N.*  
*12/21/31*

Total Capacity of Generators *40.* Kilowatts.

The amount of Fee ... *\$ 125.00*

When applied for, *23<sup>rd</sup> Jan. 19.31*

*W. Buchanan* *R. Nosworthy*  
Surveyor to Lloyd's Register of Shipping.

Travelling Expenses (if any) £ \_\_\_\_\_

When received, *27.2.31*

Committee's Minute

*NEW YORK FEB 4-1931*

Assigned *Electric Light*

Im. 12.28.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)

