

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

THU. MAR. 20 1924

Date of writing Report

10

When handed in at Local Office

19/3/10-24 Port of

NEWCASTLE-ON-TYNE

No. in Survey held at

NEWCASTLE-ON-TYNE

No. Book. Supp.

Date, First Survey 11th July 1923 Last Survey 29th Feb. 1924

(Number of Visits 20)

No. on the

Wellfield

Tons

Gross

Net

Built at Newcastle

By whom built Zue Iron Ship Co. Ltd.

Yard No. 225

When built 1924

Owners Northern Petroleum Tanks S.S. Co. Ltd.

Port belonging to

Newcastle.

Electric Light Installation fitted by Campbell Sherwood & Co. Ltd.

Contract No. 225

When fitted 1924

System of Distribution

Double wire system

Pressure of supply for Lighting

110

volts, Heating

—

volts, Power

110

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

no

, is an adjustable regulating resistance fitted in

series with each shunt field

no

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

Engine room aft on dynamo flat

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

, 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

Engine room aft on dynamo flat

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 micamite 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

, 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

Double pole switches

fuses on dynamo mains & on all outgoing circuits

Instruments on main switchboard

2

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 coupled

to earth through switches & fuses

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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Foundation

(1/2) W134-0147

Insulation of Cables, state type of cables, single or twin single + twin 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 4.27
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
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 run in galvanised steel tubing
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 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 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 yes, 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 fitted
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 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 no, are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected glass guard with rubber rings protected by metal guards, how are the cables led in screwed steel tubing, where are the controlling switches situated in saloon alleyway
Searchlight Lamps, No. of yes, whether fixed or portable yes, are their fittings as per Rule yes
Arc Lamps, other than searchlight lamps, No. of yes, are their live parts insulated from the frame or case yes, are their fittings as per Rule yes
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, 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 yes, if not of this type, state distance of the combustible material horizontally or vertically above the motors yes
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 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 yes

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 ...	2	10	110	91	350	Single cylinder open type steam engine			
AUXILIARY ...									
EMERGENCY ...									
ROTARY TRANSFORMER									

LIGHTING AND HEATING CONDUCTORS.									
Ref. No.	DESCRIPTION.	No. of Conductors.	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.				
	MAIN GENERATOR...	2	.1009	19	.083	91	18	V.I.R	lead covered
	AUXILIARY GENERATOR								
	EMERGENCY GENERATOR								
	ROTARY TRANSFORMER...								
	AUXILIARY SWITCHBOARDS								
	ENGINE ROOM ...								
	BOILER ROOM ...	2	.01046	7	.044	19.2	120	V.I.R	lead covered
	Midship Acc	2	.01462	7	.052	13.5	500	V.I.R	do
	Forward Acc	2	.00701	7	.036	6.0	720	V.I.R	do
	Navigation	2	.00701	7	.036	7.02	510	V.I.R	do
	Cargo	2	.00701	7	.036	15.0	140	V.I.R	do
	Aft Acc	2	.01462	7	.052	17.1	50	V.I.R	do
	WIRELESS ...	2	.01462	7	.052	15.0	520	V.I.R	do
	SEARCHLIGHT								
	FORE-MAST LIGHT	2	.00194	3	.029	1.02	280	V.I.R	do
	MASTHEAD LIGHT	2	.00194	3	.029	1.02	200	V.I.R	do
	SIDE LIGHTS ...	2	.00322	1	.064	1.02	40	V.I.R	lead covered twin
	COMPASS LIGHTS ...	2	.00322	1	.064	.28	10	V.I.R	Lead covered
	FOOT LIGHTS ...	2	.00194	3	.029	1.02	320	V.I.R	do
	CARGO LIGHTS ...	2	.00455	7	.029	3.6	60	V.I.R	bat type flex.
	ARC LAMPS ...								
	HEATERS ...								

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 ...								
	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 ...								
	WORKSHOP MOTOR ...	1	.01462	7	.052	25	40	V.I.R.	Lead covered
	VENTILATING FANS ...								
	Galley motor	1	.00701	7	.036	12	60	do	do
	Oil separator	2	.01462	7	.052	17.0	16.0	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.

CAMPBELL & ISHERWOOD, LTD.

PER John Wade

Electrical Engineers.

Date 17th March 1924

COMPASSES.

Distance between electric generators or motors and standard compass 275 feet

Distance between electric generators or motors and steering compass 286 feet

The nearest cables to the compasses are as follows:—

A cable carrying 1.02 Amperes on the starboard from standard compass 7 feet from steering compass.

A cable carrying 1.02 Amperes 7 feet from standard compass on the port from steering compass.

A cable carrying 7.02 Amperes 8 feet from standard compass 12 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 AND ON BEHALF OF
THE IRON SHIP-BUILDING CO. LIMITED.

A. Thomson

Builder's Signature.

Date 17th March 1924

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.)

The above installation is in accordance with the Society's Rules. The vessel is eligible in my opinion for notation electric light, wireless

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

Electric Light.
W.T.
24/3/24.

Total Capacity of Generators 24 Kilowatts

The amount of Fee ... £ 17 10/- { When applied for, 14/3/1924

Travelling Expenses (if any) £ : : { When received, See debit book.

W.T. Badger

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned



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