

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

JUN 29 1938

Date of writing Report 22-6-1938 When handed in at Local Office

Port of Rotterdam

No. in Survey held at Alblasserdam Date, First Survey 18-5-38 Last Survey 20-6-1938

Reg. Book.

on the motor vessel KENTISH COAST

Tons ^{Gross}
_{Net}

Built at Alblasserdam

By whom built M. J. van Smit Czn

Yard No. 523

When built 1938

Owners

Coast Lines Ltd.

Port belonging to

Liverpool

Electric Light Installation fitted by

N. V. A. de Hoop

Rotterdam

Contract No.

When fitted 1938

Is the Vessel fitted for carrying Petroleum in bulk

No

System of Distribution

two wire

Pressure of supply for Lighting

32

volts, Heating

volts, Power

110

volts.

Direct or Alternating Current, Lighting

D.C.

Power

D.C.

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

Generators, do they comply with the requirements regarding temperature rise yes, are they compound wound no

are they over compounded 5 per cent. no, 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 yes

approved yes Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing yes

Have certificates for generators under 100 kw. been supplied and approved 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 in motorroom Are the lubricating arrangements of the generators as per Rule yes, is the ventilation in way of the generators satisfactory yes

are they clear of all inflammable material yes if situated near unprotected yes and yes are they clear of all inflammable material yes if situated near unprotected yes

woodwork or other combustible material, state distance of same horizontally from or vertically above the generators yes are their axes of rotation fore and aft yes

are the generators protected from mechanical injury and damage from water, steam or oil yes are the prime movers and their respective generators

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 in motorroom

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 yes and yes, are they constructed wholly of durable, non-ignitable non-absorbent materials yes

is it of an approved type yes, is all insulation of high dielectric strength and of permanently high insulation resistance yes is 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 yes

type 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, temperature rise of omnibus bars yes

are moving parts of switches alive in the "off" position no are all screws and nuts securing connections effectively locked yes are any fuses fitted on the live side of switches no

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches For the light generator 32V. 1 Triple pole change-over switch and two single pole fuses, 1 single pole autom. switch for reverse current. For each outgoing group 1 double pole switch and two single pole fuses. For the power installation a double pole switch and two single pole fuses.

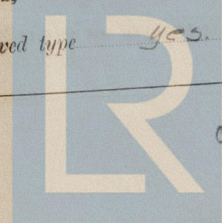
Are turbine driven generators fitted with emergency trip switch as per rule yes Are cupboards or compartments containing switchboards composed of fire-resisting material or lined with approved material yes Instruments on main switchboard 2 ammeters 2

voltmeters yes synchronising device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection yes Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system 2 sets of earth detector lamps

Switches, Circuit Breakers and Fusible Cut-outs, yes have the reversed yes are the fusible cutouts of an approved type yes do these comply with the requirements of the Rules. yes

B.S.B.

2-7-38



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current protection devices been tested under working conditions. yes ✓ are all fuses labelled as per rule 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 Single & twin are the cables insulated and protected as per Tables IV, V, X, XI, XII or XIII of the Rules yes ✓

If the cables are insulated otherwise than as per Rule, are they of an approved type yes ✓ **Fall of Pressure,** state maximum between bus bars and any point of the installation under maximum load 0.5V for light ✓ 2V for power ✓ **Cable Sockets,** are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets yes ✓ **Paper Insulated and Varnished Cambric Insulated Cables,**

If conductors are paper or varnished cambric insulated, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound _____, or waterproof insulating tape _____ **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 ✓ are cables laid under machines or floorplates no ✓ if so, are they adequately protected _____

Are cables in machinery spaces, galleys, laundries, bathrooms and lavatories lead covered or run in conduit yes ✓ **Support and Protection of Cables,** state how the cables are supported and protected Supp. by metal clips; where necessary protected by tubes ✓

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, are the cables and fittings in accordance with the special requirements _____

Joints in Cables, state if any, and how made, insulated, and protected _____

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 1/2 - 10 - 35 ✓ 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 _____

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 yes ✓ are they ventilated as per Rule 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 _____ 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 _____

are all fittings suitably ventilated yes ✓, are all switches and lampholders constructed wholly of non-ignitable, non-absorbent materials yes ✓

Heating and Cooking Appliances, are they constructed and fitted as per Rule _____, are air heaters constructed and fitted as per Rule _____

Searchlight Lamps, No. of _____ whether fixed or portable _____, 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 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 _____

have machines of over 100 BHP been inspected by the Surveyors during manufacture and testing _____ have certificates for all motors for essential services been supplied and approved _____ **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 _____ are all fuses of the filled cartridge type _____ are they of an approved type _____

If portable lamps for use in dangerous spaces are supplied, are they of a self-contained, battery-fed flameproof type approved for use in dangerous spaces _____

Spare Gear, if the vessel is for open sea service have spares been supplied as per Rule yes ✓ are they suitably stored in dry situations yes ✓

PARTICULARS OF GENERATING PLANT.									
DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.		
		Kilowatts.	Volts.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.	
MAIN	2	2 1/2	324.5	80	1250	Main motor by belt	diethyl oil	above 150°	
AUXILIARY	1	35	110	320		Aux. motor	diethyl oil	above 150°	
EMERGENCY									
Battery	1	280 Ah	32	25					
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 Nominal Area per Pole Sq. Ins. in.	No.	Diameter.	Circuit.	Rule.			
MAIN GENERATOR	1	25	7	2.13	25	64	24	Rubber	Lead cov. and arm.
EQUALISER CONNECTIONS						304			
AUXILIARY GENERATOR	2	2.95	14	2.53	300	378	24		
EMERGENCY GENERATOR									
ROTARY MOTOR TRANSFORMER GENERATOR									
ENGINE ROOM									
BOILER ROOM									
Navigation	1	2 1/2	1	1.79	5	14	105		
Acc. force	1	4	7	2.86	14	21	50		
Battery	1	6	7	1.05	25	28	50		
Accommodation	1	1 1/2	1	1.39	4	9	90		Lead covered
Accommodation									
WIRELESS									
SEARCHLIGHT									
MASTHEAD LIGHT	1	1 1/2	1	1.39	2.9	9	210		Lead cov. and arm.
SIDE LIGHTS	1	1 1/2	1	1.39	2.9	9	30		
COMPASS LIGHTS	1	1 1/2	1	1.39	2.9	9	75		
POOP LIGHTS	1	1 1/2	1	1.39	2.9	9	75		
CARGO LIGHTS	1	2 1/2	1	1.79	10	14	10		
HEATERS									

MOTOR CONDUCTORS.									
DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.) Feet.	Insulated with
		No. per Pole.	Total Nominal Area per Pole Sq. Ins. in.	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	1	1	50	14	1.83	160	115	235	Rubber Lead cov. and arm.
WINCHES, FORWARD midship	1	1	95	14	2.53	168	185	45	
WINCHES, AFT amidship	1	1	95	14	2.53	168	185	45	
STEERING GEAR—									
(a) MOTOR GENERATOR									
(b) MAIN MOTOR									
WORKSHOP MOTOR									
VENTILATING FANS									
Capstan	1	1	16	7	1.71	40	48.5	60	
Pump I	1	1	16	7	1.71	40	48.5	60	
Pump II	1	1	16	7	1.71	40	48.5	60	

The Electrical Equipment is installed in accordance with the approved plans.

All Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

N.V. ELECTROTECHNISCH-BUREAU

H. A. DE HOOP

Electrical Engineers.

Date 16-6-38.

COMPASSES.

Minimum distance between electric generators or motors and standard compass 21

Minimum distance between electric generators or motors and steering compass 22

The nearest cables to the compasses are as follows:—

A cable carrying 0.5 Ampères 2 feet from standard compass 2 feet from steering compass.

A cable carrying ✓ Ampères ✓ feet from standard compass ✓ 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 nihil degrees on every ✓ course in the case of the standard compass, and nihil degrees on every ✓ course in the case of the steering compass.

1/0 WEEF JAN SMIT Com.

Paul Benson

Builder's Signature.

Date 21-6-38.

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)

made and fitted in accordance with the approved plan. Society's Rules and Secretary's letters. It has been tested under full working condition and was found satisfactory and merits in my opinion the approval of the Committee

Noted

2-7-38.

L.H.

Total Capacity of Generators 40. Kilowatts.

The amount of Fee ...

£ 300.00

When applied for,

226 19 38

Travelling Expenses (if any) £

2

When received,

178 38

TUE 5

18/8.

C.H. Brouse
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

See other T. & E. report

2m. 12.36.—Transfer.
The Surveyors are requested not to write on or below the space for Committee's Minute.)



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