

Rpt. 13.

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

18 SEP 1930

Date of writing Report 17/6 11/9/ 1930 When handed in at Local Office

Port of Oslo

No. in Survey held at Langesund

Date, First Survey 6/3/30

Last Survey 12/6/ 1930

Reg. Book.

(Number of Visits...)

on the steel screw steamer "TORRIDAL"

Tons { Gross 1381

Net 780

When built 1930

Built at Langesund

By whom built Langesund, Melk. Verlisted Yard No. 9

Owners Ingvald Bjørnboes Rederi

Port belonging to Kristiansund

Electric Light Installation fitted by a/s Langesund Melk. Verlisted

Contract No.

When fitted 1930

Is the Vessel fitted for carrying Petroleum in bulk No.

System of Distribution Double wire

Pressure of supply for Lighting 110 volts

volts, Heating

volts, Power

Direct or Alternating Current, Lighting Direct

Power 4 kw

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 as per rule, 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

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 main engine room, on S side, aft of coal bunkers

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 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

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 main engine room, on S side on the after bunker bulkhead

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 unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards Yes

are they constructed wholly of durable, non-ignitable non-absorbent materials Yes, is all insulation of high dielectric strength and 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 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 omnibus bars as per rule

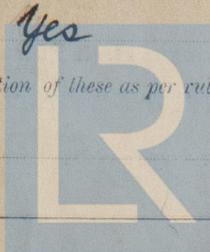
Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches double-pole switches and one fuse on each pole in each outgoing circuit

Instruments on main switchboard 1 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 by means of a volt-ohmmeter combined

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



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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

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 Yes

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 In holes cables are laid in 3/4" galv. pipes, otherwise secured by metal clips.

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 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 Yes

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 pl.

Earthing Connections, state what earthing connections are fitted and their respective sectional areas as per Rules

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 Yes

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

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 Yes

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected Yes

how are the cables led Yes

where are the controlling switches situated Yes

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 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 Yes, if not of this type, state distance of the combustible material horizontally or vertically above the motors Yes and Yes

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 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	1	4	110	36.4	635	steam engine	✓	✓
AUXILIARY	✓							
EMERGENCY	✓							
ROTARY TRANSFORMER	✓							

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	No. per Pole.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT AMPERES.		Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
		Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.				
MAIN GENERATOR	2	16 mm ²	7	1.71	14	✓	4 mtrs	rubber	lead cov. & arm.	
EQUALISER CONNECTIONS	✓									
AUXILIARY GENERATOR	✓									
EMERGENCY GENERATOR	✓									
ROTARY TRANSFORMER MOTOR GENERATOR	✓									
ENGINE ROOM	2	1.5"	1	1.382	2.50	✓	90 m.	rubber	lead cov. & arm.	
BOILER ROOM	2	1.5"	1	1.382	2.13	✓	45 "	"	"	
AUXILIARY SWITCHBOARDS	✓									
ACCOMMODATION ind. prop.	2	1.5"	1	1.382	2.95	✓	120 m	rubber	lead covered	
" officers	2	1.5"	1	1.382	5.22	✓	80 "	"	"	
" saloon	2	1.5"	1	1.382	6.10	✓	105 "	"	"	
WIRELESS										
SEARCHLIGHT	2	2.5"	1	1.763	0.75	✓	180 m.	rubber	galv. pipes	
MASTHEAD LIGHTS	2	1.5"	1	1.382	0.60	✓	24 "	rubber	lead cov. & arm.	
SIDE LIGHTS	2	1.5"	1	1.382	0.28	✓	9 "	"	lead covered	
COMPASS LIGHTS	2	2.5"	1	1.783	0.37	✓	145 "	"	lead cov. & arm.	
POOP LIGHTS	2	1.5"	1	1.382	1.20	✓	70 "	"	"	
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										
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.

Erre Tolusen

Electrical Engineers.

Date *23-8-30*

COMPASSES.

Distance between electric generators or motors and standard compass *abt. 18 metres*

Distance between electric generators or motors and steering compass *- 18 -*

The nearest cables to the compasses are as follows:—

A cable carrying *.14* Ampères *.20 m* from standard compass *.20 m* from steering compass.

A cable carrying *.60* Ampères *1.50 "* from standard compass *2.00 "* from steering compass.

A cable carrying *1.60* Ampères *1.50 "* from standard compass *2.20 "* from steering compass.

Have the compasses been adjusted with and without the electric installation 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 *✓* course in the case of the standard compass, and *nil* degrees on *✓* course in the case of the steering compass.

A/s Langesunds Mek. Verksted

H. J. Thorsen

Builder's Signature.

Date *23-8-30*

adm. direktør

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 electric light installation was examined, while being fitted onboard, and was examined and tested under working conditions, and found to work satisfactorily.

The workmanship is of the best description, and in my opinion the notation "electric light" may be entered in the Register Book.

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

Elec. Light

BT 7/10/30

Total Capacity of Generators *4* Kilowatts.

The amount of Fee ... *kr. 91.-* : *10/6* 19 *36*

Travelling Expenses (if any) £ : *4/4* 19 *30*

P. P. P. P.

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

Elec Lt.



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