

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 28356.

Port of *Sandefjord* Date of First Survey *13/2-25* Date of Last Survey *12-5-25* No. of Visits *3*  
 No. in on the Iron or Steel *71182* *GROSHOLM* Port belonging to *Osl.*  
 Reg. Book *71182* Built at *Rødby* By whom *Akt. Rødby Slams, Jernskibsselskabet* When built *1920-7*  
 Owners *Skibs A/S Grinstad (B. B. Markussen 2nd)* Owners' Address  
 Yard No. Electric Light Installation fitted by *W. F. Fanning, Nørkøster* When fitted *1925*

## DESCRIPTION OF DYNAMO, ENGINE, ETC.

Two dynamos. One  $6\frac{1}{2}$  KW. (ASEA) direct driven by 10 HP hot bulb eng. (Atlas diesel)  
 One 5 KW. Thomas A. Edison. Belt driven.

Capacity of Dynamo *30 and 23* Amperes at *220* Volts, whether continuous or alternating current *continuous*

Where is Dynamo fixed *Port side of Engine room.* Whether single or double wire system is used *double wire*

Position of Main Switch Board *Port side of engine room* having switches to groups *8 groups* of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each *In alleyways aft, in pantry and in chart house. 2-4 switches*

If fuses are fitted on main switch board to the cables of main circuit *Yes* and on each auxiliary switch board to the cables of auxiliary circuits *Yes* and at each position where a cable is branched or reduced in size *Yes* and to each lamp circuit *Yes*

If vessel is wired on the double wire system are fuses fitted to both flow and return wires or cables of all circuits including lamp circuits

Are the fuses of non-oxidizable metal *Yes* and constructed to fuse at an excess of *20%* per cent over the normal current

Are all fuses fitted in easily accessible positions *Yes* Are the fuses of standard dimensions *Yes* If wire fuses are used are permanent instructions fitted on or near each switch board giving particulars of proper size of fuse for each circuit *No wire fuses.*

Are all switches and fuses constructed of incombustible materials and fitted on incombustible bases *Yes.*

Total number of lights provided for *52* arranged in the following groups:-

Group	Description	Number of Lights	Watts each	Candle power	Current (Amperes)
A	2 groups of 8 lights each of	16	25	about 2.0	Amperes
B	1 group of 4 lights each of	4	25	" 0.5	Amperes
C	1 group of 8 lights each of	8	25	" 1.0	Amperes
D	2 groups of 4 lights each of	8	25	" 1.0	Amperes
E	1 group of 5 lights each of	5	25	" 0.6	Amperes
	2 Mast head light with 2 lamps each of	4	25	" 0.25	Amperes
	2 Side light with 2 lamps each of	4	25	" 0.25	Amperes
	3 Cargo lights of	3	96		Incandescent.

If arc lights, what protection is provided against fire, sparks, &c. *None fitted*

Where are the switches controlling the masthead and side lights placed *In chart house*

## DESCRIPTION OF CABLES.

Cable Type	Amperes	Wires	S.W.G. diameter	Area (square inches)
Main cable carrying	30	4	2x6	2.25
Branch cables carrying	10	4	2x2 1/2	1.56
Branch cables carrying	10	4	2x1 1/2	0.78
Leads to lamps carrying	20	4	2x1 1/2	0.78
Cargo light cables carrying	10	4	2x1 1/2	0.78

## DESCRIPTION OF INSULATION, PROTECTION, ETC.

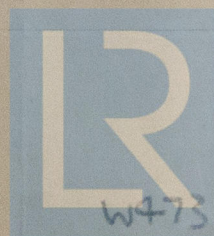
Steel protected lead cable in free air, engine room, holds and alleyways.  
 Ordinary lead cable in accommodations.

Joints in cables, how made, insulated, and protected *Joints fitted in brass boxes.*

Are all the joints of cables thoroughly soldered, and the flux used not containing acids or other corrosive substances *Yes* Are all joints in accessible positions, none being made in bunkers, cargo spaces, or spaces which may at any time be used for carrying cargo, stores, or baggage *Yes*

Are there any joints in or branches from the cable leading from dynamo to main switch board *No*

How are the cables led through the ship, and how protected *Fixed with cramps iron. See above.*



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DESCRIPTION OF INSULATION, PROTECTION, ETC.—continued.

Are they in places always accessible *Yes*

What special protection has been provided for the cables in open alleyways or where exposed to weather or moisture *Steel protected lead cable*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *No cables in the neighborhood of mentioned places.*

What special protection has been provided for the cables near boiler casings *Steel protected lead cables, partially in pipes*

How are cables carried through beams *Lead sockets* through bulkheads, &c. *Brass boxes, rubber packing.*

How are cables carried through decks *Galvanized pipes with rubber packing.*

Are any cables run through coal bunkers *No* or cargo spaces *Yes* or spaces which may be used for carrying cargo, stores, or baggage *Yes*

If so, how are they protected *Lead tight under deck, steel protected lead cable.*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *plugging connections in holds.*

If so, how are the lamp fittings and cable terminals specially protected *Watertight switches and boxes, plate covered*

Where are the main switches and fuses for these lights fitted *On main switch board.*

If in the spaces, how are they specially protected *Plate covered*

Are any switches or fuses fitted in bunkers *No*

Cargo light cables, whether portable or permanently fixed *Portable* How fixed *—*

In vessels fitted on the single wire system, how is the dynamo terminal fixed to the hull of vessel *—*

How are the returns from the lamps connected to the hull *—*

Are all the joints with the hull in accessible positions *—*

Is the installation supplied with a voltmeter *Yes* and with an amperemeter *Yes*, fixed *Main switch board*

VESSELS BUILT FOR CARRYING PETROLEUM.

In vessels built for carrying petroleum, are all switches and fuses fitted in positions not liable to the accumulation of petroleum vapour or gas *Yes.*

Are any switches, fuses, or joints of cables fitted in the pump room or companion *—*

How are the lamps specially protected in places liable to the accumulation of vapour or gas *—*

The copper used is guaranteed to have a conductivity of not less than that of the Engineering Standards Committee's standard, and the wires are protected by tinning from the sulphur compounds present in the insulating material.

Insulation of cables is guaranteed to have a resistance of not less than *—* megohms per statute mile at 60° Fahrenheit after 24 hours' immersion in water, the test being made after one minute's electrification at not less than 500 volts and while the cable is still immersed.

The foregoing statements are a correct description of the Electric Light installation fitted by us on this vessel and we declare that it is at this date in good order and safe working condition.

*A. S. Pramnes mek. Verksted*

Electrical Engineers

Date *18 Mai 1925*

COMPASSES.

Distance between dynamo or electric motors and standard compass

*About 120'*

Distance between dynamo or electric motors and steering compass

*— " — 120'*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>0.08</i>	Amperes	<i>Light House lamps.</i>	feet from standard compass	feet from steering compass
A cable carrying		Amperes		feet from standard compass	feet from steering compass
A cable carrying		Amperes		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*

The maximum deviation due to electric currents, etc., 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.

*A. S. PRAMNES MEK. VERKSTED*  
*Andersen*

Builder's Signature.

Date *12<sup>th</sup> May 1925.*

GENERAL REMARKS.

*The installation is fitted according to the rules of Veljeget for elektricitetsvesenhet. (The Norwegian State Board of Electricity), tried and found in good order.*

*It is submitted that this vessel is eligible for THE RECORD. Elec. light.*

*JWD*  
*5/4/25*

*Per G. Roli.*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.



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