

TUE MAY 22 1923 No. 6574

REPORT ON ELECTRIC LIGHTING INSTALLATION.

Port of Copenhagen. Date of First Survey 3rd January 1923 Date of Last Survey 4th April 1923 No. of Visits 11.
 No. in Reg. Book 80811 on the Iron or Steel MOTOR VESSEL "SALLY MERSK" Port belonging to Odense.
 Built at Odense By whom Odense Skibskroeri (VED A. P. MÖLLER) When built 1922-23.
 Owners Dampskibsselskabet af 1912 (A. P. Schöller) Owners' Address Copenhagen
 Yard No. 10 Electric Light Installation fitted by Den Danske Elektricitetskompani, Odense When fitted 1923.

DESCRIPTION OF DYNAMO, ENGINE, ETC.

One compound wound dynamo driven by a 12 HP. shunt wound electro-motor taking current from one of 3 comp. wound dynamos, each worked by an auxiliary Diesel oil engine.

Capacity of Dynamo 60 Amperes at 110 Volts, whether continuous or alternating current Continuous.

Where is Dynamo fixed in the engine room. Whether single or double wire system is used double wire.

Position of Main Switch Board in the engine room. having switches to groups A-B-C-D-E of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each A: in the pantry at the saloon, 5 switches; B: in the officers mess-room, 4 switches; C: in the crewspace aft, 2 switches; D: in the engine room, 3 switches; E: in the chart room, 5 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 Yes.

Are the fuses of non-oxidizable metal Yes and constructed to fuse at an excess of 100 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 Edison's code used.

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

Total number of lights provided for 118 arranged in the following groups:—

A	19 + 4 cargo	lights each of	25-50	candle power requiring a total current of	10	Amperes	
B	18 + 4 -	lights each of	25-50	candle power requiring a total current of	10	Amperes	
C	10	lights each of	25	candle power requiring a total current of	2.5	Amperes	
D	16 + 2 cargo	lights each of	25-50	candle power requiring a total current of	10	Amperes	
E	5	lights each of	25	candle power requiring a total current of	2.5	Amperes	
2	Mast head light with	1	lamps each of	25	candle power requiring a total current of	1	Amperes
1	STERN "	1	lamps each of	25	candle power requiring a total current of	0.5	Amperes
10	Cargo lights of	5 lamps à	25	candle power, whether incandescent or arc lights	incandescent.		

If arc lights, what protection is provided against fire, sparks, &c. No arc light.

Where are the switches controlling the masthead and side lights placed in the chart room.

DESCRIPTION OF CABLES.

Main cable carrying	60	Amperes, comprised of	19	wires, each	S.W.G. diameter,	50	square inches total sectional area
Branch cables carrying	10	Amperes, comprised of	7	wires, each	S.W.G. diameter,	4	square inches total sectional area
Branch cables carrying	2.5	Amperes, comprised of	3	wires, each	S.W.G. diameter,	2.5	square inches total sectional area
Leads to lamps carrying	2	Amperes, comprised of	1	wires, each	S.W.G. diameter,	1.5	square inches total sectional area
Cargo light cables carrying	1.5	Amperes, comprised of	48	wires, each	S.W.G. diameter,	1.5	square inches total sectional area

DESCRIPTION OF INSULATION, PROTECTION, ETC.

The copper wires are tinned and insulated with pure and vulcanized india rubber, taped and lead covered, then braided or taped and armoured with 1/2 galvanized steel wire or 2/3 two layers of steel tape and then braided.

Joints in cables, how made, insulated, and protected soldered and insulated, the joints being made in water-tight cast iron junction 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 secured by screwed clips, where exposed to risk of mechanical damage armoured and in cargo spaces led thro' galvanized iron tubes.



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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 *lead covered and armoured cables used*

What special protection has been provided for the cables near galleys or oil lamps or other sources of heat *do. do.*

What special protection has been provided for the cables near boiler casings *No boiler*

What special protection has been provided for the cables in engine room *lead covered and armoured cables used*

How are cables carried through beams *do. do.* through bulkheads, &c. *with watertight glands*

How are cables carried through decks *through galvanized iron tubes*

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 *by iron cases or galvanized iron pipes*

Are any lamps fitted in coal bunkers or spaces which may at times be used for cargo, coals, or baggage *No*

If so, how are the lamp fittings and cable terminals specially protected *✓*

Where are the main switches and fuses for these lights fitted *✓*

If in the spaces, how are they specially protected *✓*

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 on 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 *✓*

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 *600* 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.

Dansk Elektricitetscompagni

Aktieselskab Lyngbye Electrical Engineers

Date

COMPASSES.

Distance between dynamo or electric motors and standard compass *48'*

Distance between dynamo or electric motors and steering compass *40'*

The nearest cables to the compasses are as follows:—

A cable carrying	<i>2</i>	Amperes	<i>9</i>	feet from standard compass	<i>11</i>	feet from steering compass
A cable carrying	<i>35</i>	Amperes	<i>12</i>	feet from standard compass	<i>18</i>	feet from steering compass
A cable carrying	<i>1/4</i>	Amperes	<i>to the lamp in the</i>	feet from standard compass	<i>and to the lamp in the</i>	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 *0* degrees on *all* courses in the case of the standard compass and *0* degrees on *all* courses in the case of the steering compass.

ODENSE STAALSKIBSVÆRFT
VED A. P. MØLLER

Builder's Signature, Date *7-5-23*

GENERAL REMARKS. *The Electric Light and Power installation as above described is in accordance with the Rules requirements, the approved plan and letter to date 18th January 1923. The material used is of prime good description and the workmanship good. The whole Electric Installation has been tested under full working power and was found to work satisfactorily. Recommend the vessel to have notation of "ELECTRIC LIGHT" in the Register Book.*

The Surveyor has been noted on the Machinery Report. *It is submitted that this vessel is eligible for the RECORD.* *A. C. Jensen*
Electrical Engineer
Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 29 MAY. 1923

TUE. 18 SEP. 1923

