

# REPORT ON ELECTRIC LIGHTING INSTALLATION. No. 11055

Port of Antwerp Date of First Survey 3<sup>rd</sup> Nov-19 Date of Last Survey 10<sup>th</sup> Dec 1919 No. of Visits 6

No. in Reg. Book 16977 on the ~~Iron~~ Steel S/S "JOACHIM ZELCK" Port belonging to Antwerp  
Built at Stockton By whom Craig Taylor & Co. Ltd When built 1907-8  
Owners Belgian Government Owners' Address Rue de la Loi, 90, Brussels  
Yard No. ✓ Electric Light Installation fitted by Etalissements Belges Campbell & Isherwood When fitted 1919-12  
Svc. Amson

### DESCRIPTION OF DYNAMO, ENGINE, ETC.

Open type vertical "Robey" engine direct coupled to "Campbell & Isherwood Ltd" compound open type dynamo

Capacity of Dynamo seventy five Amperes at hundred Volts, whether continuous or alternating current continuous

Where is Dynamo fixed Port recess engine room platform Whether single or double wire system is used double wire

Position of Main Switch Board above dynamo having switches to groups \_\_\_\_\_ of lights, &c., as below

Positions of auxiliary switch boards and numbers of switches on each Engine room: 5 way - Chart room: 5 way -

Saloon alleyway: 4 way - Forecastle: 2 way - Poop: 2 way

If cut outs 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 cut outs fitted to both flow and return wires or cables of all circuits including lamp circuits yes

Are the cut outs of non-oxidizable metal yes and constructed to fuse at an excess of 30% per cent over the normal current

Are all cut outs 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 yes

Are all switches and cut-outs constructed of incombustible materials and fitted on incombustible bases yes

Total number of lights provided for eighty-seven arranged in the following groups:—

A	<u>fifteen</u> lights each of <u>sixteen</u> candle power requiring a total current of <u>five</u> Amperes
B	<u>four</u> lights each of <u>sixteen</u> candle power requiring a total current of <u>1.5</u> Amperes
C	<u>twenty</u> lights each of <u>sixteen</u> candle power requiring a total current of <u>6</u> Amperes
D	<u>forty three</u> lights each of <u>sixteen</u> candle power requiring a total current of <u>13</u> Amperes
E	<u>wireless</u> lights each of _____ candle power requiring a total current of <u>20</u> Amperes
	<u>2</u> Mast head light with <u>1</u> lamps each of <u>32</u> candle power requiring a total current of <u>2</u> Amperes
	<u>2</u> Side light with <u>1</u> lamps each of <u>32</u> candle power requiring a total current of <u>2</u> Amperes
	<u>20</u> Cargo lights of <u>16</u> candle power, whether incandescent or arc lights <u>incandescent</u>

If arc lights, what protection is provided against fire, sparks, &c.

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

### DESCRIPTION OF CABLES.

Main cable carrying 70 Amperes, comprised of 19 wires, each 14 L.S.G. diameter, 0.09372 square inches total sectional area

Branch cables carrying 30 Amperes, comprised of 7 wires, each 14 L.S.G. diameter, 0.03457 square inches total sectional area

Branch cables carrying 10 Amperes, comprised of 7 wires, each 22 L.S.G. diameter, 0.004218 square inches total sectional area

Leads to lamps carrying 2 Amperes, comprised of 1 wires, each 18 L.S.G. diameter, 0.001810 square inches total sectional area

Cargo light cables carrying 2 Amperes, comprised of 40 wires, each 36 L.S.G. diameter, 0.002994 square inches total sectional area

### DESCRIPTION OF INSULATION, PROTECTION, ETC.

Para vulcanized rubber, taped, braided & compounded. — Para vulcanized rubber, taped & lead covered. — Para vulcanized rubber, taped, lead covered, taped, armoured, braided & compounded. — All 600 megohm, association grade.

Joints in cables, how made, insulated, and protected none

Are all the joints of cables thoroughly soldered, resin only having been used as a flux none 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 in galvanized steel piping



**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 cable or vulcanized wire in steel piping ✓  
 What special protection has been provided for the cables near galleys or oil lamps or other sources of heat cables have been kept clear ✓  
 What special protection has been provided for the cables near boiler casings cables have been kept clear ✓  
 What special protection has been provided for the cables in engine room lead covered, armoured & braided cable has been used ✓  
 How are cables carried through beams lead bushed holes ✓ through bulkheads, &c. watertight glands ✓  
 How are cables carried through decks in pipes ✓  
 Are any cables run through coal bunkers yes or cargo spaces yes or spaces which may be used for carrying cargo, stores, or baggage yes ✓  
 If so, how are they protected by galvanized steel piping ✓  
 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 cut outs for these lights fitted  
 If in the spaces, how are they specially protected  
 Are any switches or cut outs 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 ✓  
 The installation is fitted and supplied with a voltmeter and also an amperemeter, fixed on switchboard ✓

**VESSELS BUILT FOR CARRYING PETROLEUM.**

In vessels built for carrying petroleum, are all switches and cut-outs fitted in positions not liable to the accumulation of petroleum vapour or gas ✓  
 Are any switches, cut outs, 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 98 per cent. that of pure copper.  
 Insulation of cables is guaranteed to have a resistance of not less than six hundred megohms per statute mile after 24 hours' immersion in seawater.

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.

Wm Banks

Electrical Engineers Date

**COMPASSES.**

In administration.  
 Distance between dynamo or electric motors and standard compass 80 feet  
 Distance between dynamo or electric motors and steering compass 80 feet  
 The nearest cables to the compasses are as follows:—  
 A cable carrying 0.5 Amperes 6 feet from standard compass 5 feet from steering compass  
 A cable carrying 0.5 Amperes 6 feet from standard compass 5 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 no, but will be before the vessel leaves Flushing, as arranged with the Captain  
 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. ✓

Builder's Signature. Date ✓

**GENERAL REMARKS.**

This installation has been fitted on board under survey, the workmanship and materials are good, & has been tried under full working conditions & found satisfactory.

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

H. H. Pilditch.

Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

TUE 30 DEC. 1919

TUE MAR 2 1920



THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.