

Report on Refrigerating Machinery and Appliances.

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 No. in Reg. Book. Survey held at GRIMSBY. Date: First Survey 5th July Last Survey 30th September 1948.
50877 (Number of Visits 11.)
 on the Refrigerating Machinery and Appliances of the M/V. "ALOUETTE" Tons { Gross 276
 Net 93
 Vessel built at Groningen By whom built J. Koster Hzn. Yard No. - When built 1938 6.
Schpsw "Gideon"
 Owners General Steam Navigation Co. Ltd. Port belonging to London Voyage London.
13160 &
 Refrigerating Machinery made by J. & E. Hall, Ltd. Machine Nos. 13161 When made 1948
 Insulation fitted by Cork Insulation & Asbestos Co., Ltd. When fitted 1948 System of Refrigeration F. 12
 Method of cooling Cargo Chambers Air Y. Ben Esq. Insulating Material used Glass wool and slab cork.
 Number of Cargo Chambers insulated 1. Total refrigerated cargo capacity cubic feet

DESCRIPTION OF REFRIGERATING MACHINERY. Where placed

Refrigerating Units, No. of No. of machines Is each machine independent
 Total refrigeration or ice-melting capacity in tons per 24 hours Are all the units connected to all the refrigerated chambers
 Compressors, driven direct or through single } reduction gearing. Compressors, single or double acting If multiple effect compression
double }
 Are relief valves or safety discs fitted No. of cylinders to each unit Diameter of cylinders
 Diameter of piston rod Length of stroke No. of revolutions per minute
 Motive Power supplied from
 (State number of boilers, oil engines or electric generators supplying the motive power.)
 Steam Engines, high pressure, compound, or triple expansion, surface condensing. No. of cylinders Diameter
 Length of stroke Working pressure Diameter of crank shaft journals and pins
 Breadth and thickness of crank webs No. of sections in crank shaft Revolutions of engines per minute
 Oil Engines, type 2 or 4 stroke cycle Single or double acting B.H.P.
 No. of cylinders Diameter Length of stroke Span of bearings as per Rule
 Maximum pressure in cylinders Diameter of crank shaft journals and pins
 Breadth and thickness of crank webs No. of sections in crank shaft Revolutions of engine per minute
 Air Receivers:—Have they been made under survey State No. of Report or Certificate
 Is each receiver, which can be isolated, fitted with a safety valve as per Rule
 Can the internal surfaces of the receivers be examined and cleaned Is a drain fitted at the lowest part of each receiver
 No. of Receivers Cubic capacity of each Internal diameter thickness
 Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules
 Electric Motors, type No. of Rated Kilowatts Volts
 at revolutions per minute. Diameter of motor shafts at bearings
 Reduction Gearing Pitch circle diameter, pinion Main wheel Width of face
 Distance between centres of pinion and wheel faces and the centre of the adjacent bearings, pinion Main wheel
 Pinion shafts, diameter at bearings Main wheel shaft, diameter at bearings
 Gas Condensers, No. of Cast iron or steel casings Cylindrical or rectangular Are safety valves fitted
 to casings No. of coils in each Material of coils Can each coil be readily shut off or disconnected
 Water Circulating Pumps, No. and size of pumps available how worked Gas Separators, No. of
 Gas Evaporators, No. of Cast iron or steel casings Pressure or gravity type If pressure type, are safety
 valves fitted No. of coils in each casing Material of coils Can each coil be readily shut off or disconnected
 Direct Expansion or Brine Cooled Batteries, No. of Are there two separate systems, so that one may be in use while the other is being
 cleared of snow No. of coils in each battery Material of coils Can each coil be readily shut off or
 disconnected Total cooling surface of battery coils Is a watertight tray fitted under each battery
 Air Circulating Fans, Total No. of each of cubic feet capacity, at revolutions per minute
 Steam or electrically driven Where spare fans are supplied are these fitted in position ready for coupling up
 Brine Circulating Pumps, No. and size of, including the additional pump how worked
 Brine Cooling System, closed or open Are the pipes and tanks galvanised on the inside
 No. of brine sections in each chamber
 Can each section be readily shut off or disconnected Are the control valves situated in an easily accessible position

NOTE.—THE WORDS WHICH DO NOT APPLY SHOULD BE DELETED.

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Are thermometers fitted to the outflow and to each return brine pipe..... Where tanks are closed are they ventilated as per Rule.....
Where the tanks are not closed is the compartment in which they are situated efficiently ventilated.....
Are the number and capacity of the machines and the number of pumps and sea connections in accordance with Section 2, Clause 1 of the Rules.....
Is the exhaust steam led to the main and auxiliary condensers.....

HYDRAULIC AND OTHER TESTS.

| DESCRIPTION. | Date of Test. | Working Pressure. | Hydraulic Test Pressure. | Air Test Pressure. | Stamped. | REMARKS. |
|--|---------------|-------------------|--------------------------|--------------------|----------|----------|
| Engine Cylinders (if tested) ... | | | | | | |
| Gas Compressors ... | | | | | | |
| „ Separators ... | | | | | | |
| „ Multiple Effect Receivers ... | | | | | | |
| „ Condenser Coils ... | | | | | | |
| „ Evaporator Coils ... | | | | | | |
| „ Condenser Headers and Connections ... | | | | | | |
| „ Condenser Casings ... | | | | | | |
| „ Evaporator Casings ... | | | | | | |
| NH ₃ Condenser, Evaporator and Air Cooler Coils after erection in place | | | | | | |
| Brine Piping after erection in place... | | | | | | |

Have important steel castings and forgings been tested in accordance with the Rules.....

Cooling Test. Has the refrigerating machinery been examined under full working conditions, and found satisfactory.....

Dates of test..... Density of Brine..... by..... hydrometer.....

Temperatures (when the cargo chambers are cooled down to the required test temperatures) of delivery and return air at direct expansion or brine cooled

batteries..... &....., outflow and return brine..... &.....

atmosphere..... cooling water inlet and discharge..... &..... gas in condensers..... and evaporators.....

the average temperature of the refrigerated chambers..... and the rise of temperature in these chambers upon the expiration of..... hours

time after the machinery and cooling appliances have been shut off.....

SPARE GEAR.

Are the working parts of the machines, pumps and motors respectively, interchangeable.....

Has the spare gear required by the Rules been supplied.....

Additional Spare Gear Supplied:.....

The foregoing is a correct description of the Refrigerating Machinery.

Manufacturer.....

DESCRIPTION OF INSULATION.

| IN LOWER HOLD CHAMBERS. | | | | | | IN 'TWEEN DECK CHAMBERS. | | | | |
|-------------------------------|------------|---------------|--------------------------|---------------------|---------------|--------------------------|---------------|--------------------------|---------------------|---------------|
| | Air Space. | Outer Lining. | Non-conducting Material. | Thickness of ditto. | Inner Lining. | Air Space. | Outer Lining. | Non-conducting Material. | Thickness of ditto. | Inner Lining. |
| Frame No. (Fore Peak) A | | | | | | | | | | |
| Frame No. F | | | | | | | | | | |
| Frame No. A | | | | | | | | | | |
| Frame No. F | | | | | | | | | | |
| Frame No. A | | | | | | | | | | |
| Frame No. F | | | | | | | | | | |
| Frame No. (Boiler Room) A | | | | | | | | | | |
| Frame No. (Engine Room) A | | | | | | | | | | |
| Frame No. F | | | | | | | | | | |
| Frame No. A | | | | | | | | | | |
| Frame No. F | | | | | | | | | | |
| Frame No. A | | | | | | | | | | |
| Frame No. F | | | | | | | | | | |
| Frame No. A | | | | | | | | | | |
| Frame No. 24. F None | | 12 g. Steel. | Glass wool | 10" | None | | | | | |
| Frame No. 0. F None | | 12 g. Steel. | Glass wool | 10" | None | | | | | |
| Frame No. (After Peak) F None | | 12 g. Steel. | Glass wool | 10" | None | | | | | |
| Sides ... | None | do. | do. | 11" | None | | | | | |
| Overheading ... | None | do. | do. | 13" | None | | | | | |
| Floors of Chambers ... | None | Asphalt | cork | 8 1/2" | None | | | | | |
| Trunk Hatchways | | | | | | | | | | |
| Thrust Recess, Sides and Top | | | | | | | | | | |
| Tunnel Sides and Top | | | | | | | | | | |
| Tunnel Recess, Front and Top | | | | | | | | | | |

Frames or Reverse Frames, Face -

Bulkhead Stiffeners, Top - Bottom - and Face -

Ribband on Top of Decks. 15" x 6" (bot.) x 3" (top) Oregon pine with 1/8" thick galvanised coaming (plates.

Side Stringers, Top None Bottom None and Face None

Web Frames, Sides None and Face None

Brackets, Top 3" x 3" wood grounds glass wool packed. Bottom - and Face 3" wood capping and

Insulated Hatches, Main Wood plugs & "ELDORITE" mats. Bilge None Burmabright Steel facing.

Hatchway Coamings, Main Not insulated. Bilge None

Hold Pillars Glass wool with Burmabright Steel facing.

Masts None Ventilators Glass wool with Burmabright Steel facing.

Are insulated plugs fitted to provide easy access to bilge suction roses. - tank, air, and sounding pipes - heels of pillars -

and manhole doors of tanks. - Are insulated plugs fitted to ventilators. - cargo ports - and side lights -

Is the insulation of the lower hold floor and hatchway protected Yes. if so, how Wood gratings.

Oil Storage Tanks, where adjacent to the insulated chambers, state what provision has been made for ventilating the air space between the insulation and the bulkhead plating. None.

and for draining the tank top. None.

Fireproof Insulation. Is the insulation and woodwork fireproof in way of bunkers or any surfaces exposed to excessive heat. None. Where

Cooling Pipes pass through watertight bulkheads or deck plating, are the fittings and packing of the stuffing boxes both watertight and fireproof Yes.

Cargo Battens, Dimensions and spacing, sides. None. floors. 2.3/4" x 1 1/2" tunnel top. None.

fixed or portable. Portable Are screens fitted over the brine grids at chamber sides. - hinged or permanently fixed. -

Thermometer Tubes, No. and position in each chamber. 4. 2 port side, 1 starboard side, 1 aft.

diameter. 2 1/8" are they fitted in accordance with Section 3, Clause 8. Yes.

Protection of Pipes. Are all pipes, including air and sounding pipes, which pass through or into insulated chambers, well insulated. Yes.

Draining Arrangements. What provision is made for draining the inside of the chambers. Scupper pipe to after well.

Where sluices, scupper pipes, and drain pipes are fitted are means provided for blanking them off Yes. Self-closing cock.

What provision is made for draining the refrigerating machinery room. 2 scuppers with self-closing cocks.

brine return room. - fan room drip trays to water circulating pump room. -

Are all air spaces behind insulation arranged to drain to the bilges, bilge wells, or gutterways of the respective chambers.

Sounding Pipes, No. and position in each chamber situated below the load water line. None.
Diameter. - Are all sounding pipes in way of insulated chambers fitted in accordance with Section 3, Clause 11. -
Are all wood linings tongued and grooved. Steel facings Are cement facings reinforced with expanded steel lattice. -
How is the expanded metal secured in place. -
How are the cork slabs secured to the steel structure of the vessel. -
Air Trunkways in Chambers. Are the arrangements satisfactory and in accordance with the approved plans. Yes.
Are they permanently fixed or collapsible, or portable. Permanently fixed.

Where air trunkways pass through watertight bulkheads, are they fitted with watertight doors. None Are the door frames efficiently insulated. Yes.
Are insulated plugs supplied for the doorways. Yes. Where are the doors worked from. Outside in tween deck space.
Cooling Pipes in Chambers, diameter. None Minimum thickness. - Are they galvanised externally. -
How are they arranged in the chambers. -

Thawing Off, what provision is made for removing the snow from the cooling pipes in the chambers. -

The foregoing is a correct description of the Insulation and Appliances.

Builders.

&
Plans. Are approved Plans ~~or~~ Specifications forwarded herewith for the Refrigerating Machinery. Yes. and Insulation. Yes.
(If not, state date of approval)
Is the Refrigerating Machinery and Appliances duplicate of a previous case. No. If so, state name of vessel. -
If the survey is not complete, state what arrangements have been made for its completion and what remains to be done.
To complete the survey the chamber to be cooled down to approximately 10°F. and Spare Gear to be checked.
It was stated that the survey would be completed on the vessel's arrival at Deptford, London, for which port the vessel has now left. On a preliminary cooling down test when 17°F. was obtained, the insulation on forward bulkhead, port and starboard sides of shell and deck plating was seen frosted. (See letter attached).

General Remarks (State quality of workmanship, opinions as to class, &c.)

Submitted for the information of the Committee.

PARTICULARS TO BE ENTERED IN REGISTER BOOK.

| REFRIGERATING MACHINES. | | | | | System of (1) Refrigerating (2) Insulating the Chambers. | Ice melting capacity per 24 hours. Tons. | Is Refrigerating Machinery Electrically Driven? | INSULATED CARGO CHAMBERS. | |
|-------------------------|------------------------|---------|---------|--------------------------|---|---|--|------------------------------|------------------------|
| No. of Units. | No. of Compressors. | System. | Makers. | Date of Construction. | | | | No. | Capacity. Cubic ft. |
| | | | | | | | | | <u>4,300</u> |

Fee £ : : | Fee applied for, 19.....
Travelling Expenses £ : : | Received by me, 19.....

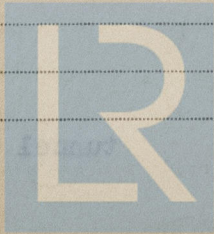
E. V. Dux

Surveyor to Lloyd's Register.

Committee's Minute

Assigned

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