

REPORT ON REFRIGERATING MACHINERY AND APPLIANCES.

(Received at London Office)

28 SEP 1943

27 APR 1944

Date of writing Report 28 SEP 1943

When handed in at Local Office

28 SEP 1943

Port of London

No. in

Reg. Book.

Survey held at London

Date: First Survey 19th June 42Last Survey 21st Sept. 1943

(No. of Visits)

20

on the Refrigerating Machinery and Appliances of the

M.V. COULDEST

Tons

Gross

Net

Vessel built at Newcastle

By whom built

Hawthorn Leslie & Co. Ltd. Yard No. 655

When built 1943.

Owners Houlder Bros. & Co. Ltd

Port belonging to

Voyage

Refrigerating Machinery made by

J. E. Hall Ltd.

Machine Nos.

11237

11238

11239

When made 1943

Insulation fitted by

When fitted

System of Refrigeration CO₂ + Brine

Method of cooling Cargo Chambers

Air cooled.

Insulating Material used

473,170

Number of Cargo Chambers insulated

55 22

Total refrigerated cargo capacity

585,000

cubic feet.

DESCRIPTION OF REFRIGERATING MACHINERY. Where placed Upper deck P+S midship

Refrigerating Units, No. of

3

No. of machines

3

Is each machine independent

yes

Total refrigeration or ice-melting capacity in tons per 24 hours

195

Are all the units connected to all the refrigerated chambers

yes

Compressors, driven direct ~~or through~~ ^{single} ~~double~~ ^{reduction gearing}

Compressors, single or double acting

Single

If multiple effect compression

no

Are relief valves or safety discs fitted

yes

No. of cylinders to each unit

2

Diameter of cylinders

5 3/8"

Diameter of piston rod

2 1/4"

Length of stroke

10"

No. of revolutions per minute

300 max

Motive Power supplied from

Four dynamos

(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

6 1/2" jls., 4" pins

Breadth and thickness of crank webs

9" x 4 1/2"

No. of sections in crank shaft

one

Revolutions of engine per minute

300/200

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:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Can the internal surfaces of the receivers be examined

What means are provided for cleansing their inner surfaces

Is there a drain arrangement fitted at the lowest part of each receiver

If made under survey

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

open with canopy

No. of

3

Rated

185 B.H.P. Kilowatts

Volts at

220. at 300/200

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

Pinion shafts, diameter at bearings

Main wheel shaft, diameter at bearings

Gas Condensers, No. of

3

14 casings per condenser

Cast iron or steel casings

Copper

Cylindrical or rectangular

cylindrical

Are safety valves fitted

to casings

1

No. of coils in each

one per casing

Material of coils

S.D. Copper

Can each coil be readily shut off or disconnected

yes

Water Circulating Pumps, No. and size of pumps available

2 - 8" vent. centri

how worked

elec. direct

Gas Separators, No. of

6

Gas Evaporators, No. of

3

Cast iron or steel casings

Steel

Pressure or gravity type

pressure

If pressure type, are safety

valves fitted

1

No. of coils in each casing

15

Material of coils

Steel

Can each coil be readily shut off or disconnected

Direct Expansion or Brine Cooled Batteries, No. of

52

Are there two separate systems, so that one may be in use while the other is being

cleared of snow

no

No. of coils in each battery

See list attached

Material of coils

S.D. Steel

Can each coil be readily shut off or

disconnected

yes

Total cooling surface of battery coils

35,500 sq. ft.

Is a watertight tray fitted under each battery

yes

Air Circulating Fans, Total No. of

56

each of

cubic feet capacity, at

revolutions per minute

Steam or electrically driven

electrically

Where spare fans are supplied are these fitted in position ready for coupling up

no

Brine Circulating Pumps, No. and size of, including the additional pump

5 - 6" vent. centri

how worked

elec. direct coupled

Brine Cooling System, closed or open

closed

Are the pipes and tanks galvanised on the inside

no

No. of brine sections in each chamber

See separate table attached.

Can each section be readily shut off or disconnected

yes

Are the control valves situated in an easily accessible position

yes

Manufacturer.

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

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 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

Are they permanently fixed or collapsible, or portable

Where air trunkways pass through watertight bulkheads, are they fitted with watertight doors

Are the door frames efficiently insulated

Are insulated plugs supplied for the doorways

Where are the doors worked from

Cooling Pipes in Chambers, diameter

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 and Insulation

(If not, state date of approval)

Is the Refrigerating Machinery and Appliances duplicate of a previous case 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

General Remarks (State quality of workmanship, opinions as to class, &c.) The refrigerating machinery was constructed under special survey and the materials and workmanship are good and it will be eligible for the notation + Lloyds R.M.C (with date) when the installation and testing have been satisfactorily completed.

PARTICULARS TO BE ENTERED IN REGISTER BOOK.

REFRIGERATING MACHINES.					System of (1) Refrigerating (2) Insulating the Chambers.	Ice melting capacity per 24 hours.	Is Refrigerating Machinery Electrically Driven?	INSULATED CARGO CHAMBERS.	
No. of Units.	No. of Compressors.	System.	Makers.	Date of Construction.				No.	Capacity. Cubic ft.
3	6	Carburehy	J. E. Hallid	1943	(1) Air	195		55	585,000

LOW 1/2 160.00 42
Fee 1/2 132.00 1/8
Travelling Expenses £ : :
Fee applied for, 19
Received by me, 19

D. Gemmell.
Surveyor to Lloyd's Register.

Committee's Minute THURS 4 MAY 1944

Assigned

See minute
on Nov. J.E. Rpt.



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Foundation