

REPORT ON REFRIGERATING MACHINERY AND APPLIANCES.

(Received at London Office)

3 DEC 1928

Date of writing Report 1st Dec^r 1928 When handed in at Local Office 1st Dec^r 1928 Port of NEWCASTLE-ON-TYNE.

No. in

Reg. Book. Survey held at Wallsend-on-Tyne Date: First Survey 17th Sept^r 1928 Last Survey 1st Dec^r 1928

71576

(No. of Visits)

30

on the Refrigerating Machinery and Appliances of the M.Y. "Port Alma" Tons {Gross 7982.72.
Net 4925.89.

Vessel built at Wallsend-on-Tyne By whom built Swan Hunter & Wigham Yard No. 1341 When built 1928

Owners Commonwealth & Dominion Line L^d Port belonging to Richardson L^d London Voyage Australia, via
Amber & London.Refrigerating Machinery made by J & E. Hall L^d Machine No. 7349. 7350. When made 1928.Insulation fitted by Gregson & Co L^d. When fitted 1928 System of Refrigeration C.O₂ & Brine,
also air.Cheese Room & Chilled Meat Room = Donald Bean Insulators & Engineers L^d. Insulating Material used Granulated Cork.
Method of cooling Cargo Chambers Brine Grids. air circulated over side grids in seven decks & thro' trunks in 40 holds. Cheese Room & Chilled Meat Room = Cork
Slabs.Number of Cargo Chambers insulated Three holds & three lower decks Total refrigerated cargo capacity 335,000 cubic feet.
Cheese Room & Chilled Meat Room.

DESCRIPTION OF REFRIGERATING MACHINERY. Where placed

Refrigerating Units, No. of Single, double, or triple Cubic feet of air delivered per hour

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 No. of cylinders
double }

Diameter of cylinders Diameter of piston rod Length of stroke No. of strokes per minute

Motive Power supplied from

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

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

Electric Motors, type No. of Rated Kilowatts

Volts at revolutions per minute. Diameter of motor shafts at bearings

Reduction Gearing, maximum shaft horse power at 1st pinion Revolutions per minute at full power at 1st pinion

2nd pinion 1st reduction wheel main shaft Pitch circle diameter, 1st pinion 2nd pinion

1st reduction wheel Main wheel Width of face, 1st reduction wheel Main wheel

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings, 1st pinion 2nd pinion

1st reduction wheel Main wheel Flexible pinion shafts, diameter 1st 2nd

Pinion shafts, diameter at bearings, External, 1st 2nd Internal, 1st 2nd

Diameter at bottom of teeth of pinion, 1st 2nd Wheel shafts, diameter at bearings, 1st

Main Diameter at wheel shroud, 1st Main

Gas Condensers, No. of Cast iron or steel casings Cylindrical or rectangular

No. of coils in each Material of coils Can each coil be readily shut off or disconnected

Water Circulating Pumps, No. and size of how worked Gas Separators, No. of

Gas Evaporators, No. of Cast iron or steel casings Pressure or gravity type

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.

Steam Condensing Plant. *State what provision is made for condensing steam, in terms of Section 4, Clauses 13 and 14*

DESCRIPTION.	Date of Test.	Working Pressure.	Hydraulic Test Pressure.	Air Test Pressure.	Stamped.	REMARKS.
ENGINE CYLINDERS (IF TESTED)						
GAS COMPRESSORS						
" SEPARATORS						
" 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..						

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

Dates of test 23/24-11-28 Density of Brine 45° by hydrometer

Temperatures (when the cargo chambers are cooled down to the required test temperatures) of air at the snow box and of the return air - & - or, delivery and return air at direct expansion or brine cooled batteries - & -, outflow and return brine -10° F. & -5° F. atmosphere 56° F. cooling water inlet and discharge 44° F. & 52° F. gas in condensers 64° F. and evaporators -11° F.

the average temperature of the refrigerated chambers 3° F. and the rise of temperature in these chambers upon the expiration of 12 hours time after the machinery and cooling appliances have been shut off 12.4° F. = 1.06° F. rise per hour.

The foregoing is a correct description of the Refrigerating Machinery.

Manufacturer.

[illegible]

ns provided for blanking them off *scrimed plugs*.
 fitted to 2 Scupper in each hold.
 ting pump room 1 Scupper.
 nbers No air spaces.
 0047 2 1/2

Sounding Pipes, No. and position in each chamber situated below the load water line. *One P+S of each hold to Bilge & usual double bottom sounding pipes*

Diameter *1 5/8"* Are all sounding pipes in way of insulated chambers fitted in accordance with Section 3, Clause 11 *Covered with the ordinary bulkhead or shell insulation.*

Are all wood linings tongued and grooved *Yes.* Are cement facings *reinforced with expanded steel lattice. Two thicknesses of unlike each 1/2".*

How is the expanded metal secured in place *Unlike secured to grounds with driving nails & joints covered with lead strips screwed.*

How are the cork slabs secured to the steel structure of the vessel *Secured by grounds bolted to frames & to one another with skewers.*

Air Trunkways in Chambers, inside dimensions, main *Three sides of twin decks No 1 and branch Trunkways P+S of each Hold Holds 10"-12" No 2 Hold 12"-16".*

Are they permanently fixed or collapsible, or portable *Portable* State position in chambers *Both sides & one end in each*

Tween deck Chamber, Smeach Hold: *Rectangular Trunks P+S under beams near line of pillars, 15"x12" lead fore & aft with vertical branches to bottom of Holds = 12"x12".*

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 *1 1/2"* Are they galvanised externally *No painted.*

How are they arranged in the chambers *Roof & side grids.*

Thawing Off, what provision is made for removing the snow from the cooling pipes in the chambers *Steam heated brine.*

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

For Messrs Gregson & Co

G. J. Salmon

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 *Yes* If so, state name of vessel *M. V. "Port Fairy".*

If the survey is not complete, state what arrangements have been made for its completion and what remains to be done *Complete.*

Same Builder's No 1339.

General Remarks (State quality of workmanship, opinions as to class, &c.) *The materials & workmanship are good. The requirements of the Society's Rules & Regulations have been carried out & the vessel is therefore, in our opinion, eligible to have the notations **Lloyds R.M.C. 12-28.** recorded in the Register Book.*

The Machinery & appliances, as detailed in the London Report, has now been securely fitted on board the vessel, tried under full working condition & found satisfactory.

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

+ Lloyds RMC 12-28

J.D.M. 2/12/28

PARTICULARS TO BE ENTERED IN REGISTER BOOK.

REFRIGERATING MACHINES.					System of (1) Refrigerating (2) Insulating the Chambers.	POWER.		INSULATED CARGO CHAMBERS.	
No. and whether Single or Duplex.	Makers.	Date of Construction.	System.	Type.		Cubic feet of air delivered per hour.	Ice melting capacity per 24 hours. Tons.	No.	Capacity.
<i>See London Report</i>					(1) Brine Fair			3 Holds	
					(2) Granul Cork			3 Tween Decks	
					Chilled meat Room			Chilled Meat Room	
					Chase Room = Slab Cork			Chase Room	
					faced with Unlike.			8 = 336,000.	

Fee £ : { Fee applied for, 19 *6-12-1928* Received by me, *Thomas S. Shute & Co. A. Hugueny* Surveyor to Lloyd's Register.

Tate has 2-2-0 repair for Survey fees.
Committee's Minute
TUE. 4 DEC 1928

Assigned *Lloyds RMC 12-28*

CERTIFICATE WRITTEN.



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