

Reg. 17,

No. 6420

Report on Refrigerating Machinery and Appliances.

Date of writing Report Nov. 28th 44 When issued in at Local Office Nov. 28 44 Registered at London Office 30 JAN 1945
 No. in Reg. Book 89309 Survey held at Montreal, P.Q. Date: Oct. 2nd Part of MONTREAL, P.Q. Last Survey Nov. 16th. 44
 Number of visits 15

in the Refrigerating Machinery and Appliances of the S/S "EMPIRE LADY" Gross 7046
 built at Newcastle By whom built Shipbldg. Corpn. Ltd. Net 4747
Ministry of War Transport Port belonging to Newcastle Yard No. 8 When built 1944 - 8
 Refrigerating Machinery made by L. Sterne & Co. Ltd. Machine Nos. 2576
Foundation Co. of Canada Ltd. When made 1944
 at Montreal, P.Q. When fitted 1944 System of Refrigeration NH₃ (Dir.) (Exp.)
 Method of cooling Cargo Chambers Air Cooled Insulating Material used Slab & Granulated Cork & Rock Wool
 Number of Cargo Chambers insulated Three Total refrigerated cargo capacity 252,286 cubic feet

DESCRIPTION OF REFRIGERATING MACHINERY. Where placed In 'tween decks at after end Engine Room.

Refrigerating Units, No. of No. of machines Is each machine independent

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

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

Power supplied from (State number of boilers, oil engines or electric generators supplying the motive power.)

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

Thickness and thickness of crank webs No. of sections in crank shaft Revolutions of engines per minute

Engines, type 2 or 4 stroke cycle Single or double acting B.H.P.

Number of cylinders Diameter Length of stroke Span of bearings as per Rule

Maximum pressure in cylinders Diameter of crank shaft journals and pins

Thickness and thickness of crank webs No. of sections in crank shaft Revolutions of engine per minute

Receivers:—Have they been made under survey State No. of Report or Certificate

Each receiver, which can be isolated, fitted with a safety valve as per Rule

The internal surfaces of the receivers be examined and cleaned Is a drain fitted at the lowest part of each receiver

Receivers Cubic capacity of each Internal diameter thickness

Less, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules

Electric Motors, type No. of Rated Kilowatts Volts

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 centres of the adjacent bearings, pinion Main wheel

On shafts, diameter at bearings Main wheel shaft, diameter at bearings

Condensers, No. of Cast iron or steel casings Cylindrical or rectangular Are safety valves fitted

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

For Circulating Pumps, No. and size of pumps available how worked Gas Separators, No. of

Evaporators, No. of Cast iron or steel casings Pressure or gravity type If pressure type, are safety

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

For Expansion or Brine Cooled Batteries, No. of Are there two separate systems, so that one may be in use while the other is being

Refrigerants of snow No. of coils in each battery Material of coils Can each coil be readily shut off or

Refrigerants connected Total cooling surface of battery coils Is a watertight tray fitted under each battery

Refrigerating Fans, Total No. of each of cubic feet capacity, at revolutions per minute

Refrigerants or electrically driven Where spare fans are supplied are these fitted in position ready for coupling up

For Circulating Pumps, No. and size of, including the additional pump how worked

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

Sounding Pipes, No. 100, position in each chamber situated below the load water line. **Yes**
Diaphragms, Are all sounding pipes in way of insulated chambers fitted in accordance with Section 3, Clause 11. **Yes**
Are all sounding pipes grooved. **Yes** **Are cement facings reinforced with expanded steel lattice**
How are the cork stabs secured to the steel structure of the vessel. **Fitted in U.K.**
Air Trunking in Chambers, Are the arrangements satisfactory and in accordance with the approved plans. **Yes**
Are the doors of chambers, fixed, or portable. **Nos. 2 & 3 Lower Hold Suction Trunks Portable all others fixed**
W.T. Hinged Doors in Twn. Dk. Bhd. 109 (P&S) for access to No. 2 Coolers. **Yes**
Are the door frames efficiently insulated. **Yes**
Are insulated plugs supplied for the doorways. **Yes** Where are the doors worked from. **Access Passage to Nos. 2 & 3 Coolers.**
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. **Batteries Hot Gas & Atmosphere**
The foregoing is a correct description of the Insulation and Appliances. **THE FOUNDATION CO. OF CANADA LIMITED**
W. H. Hunter Builders.

Plans. Are approved Plans or Specifications forwarded herewith for the Refrigerating Machinery and Insulation. **No**
(If not, state date of approval) **Yes** **"EMPIRE PENDENNIS"**
Is the Refrigerating Machinery and Appliances duplicate of a previous case. **Yes** If so, state name of vessel. **Survey Complete.**
If the survey is not complete, state what arrangements have been made for its completion and what remains to be done.
During a preliminary test of the refrigerating machinery undue vibration of the port machine was experienced. Reverse angle stiffeners now fitted to 2nd deck beams in way, and machine found satisfactory under subsequent full load operation.

Note:- The capacity given below is taken from the plan on board.
General Remarks (State quality of workmanship, opinions as to class, &c.) **The insulation of the Refrigerated Cargo Spaces of this vessel has been completed in accordance with the approved plans and in conformity with the Society Rules. The required machinery and cooling down tests have been satisfactorily carried out.**
The Refrigerating Machinery and Appliances of this vessel are now complete and eligible in my opinion to have the notation of ALLOYD'S R.M.C. 11,44.

On the vessel loading refrigerated cargo at this port a Loading Survey was satisfactorily carried out, and a Loading Certificate issued accordingly.

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.
2	3	Ammonia	L. Sterne & Co. Ltd.	1944	(1) Dir. Exp. (2) Slap & Gran. Rock Wool	64	No	3	252,286

Fee \$110.00 : Fee applied for, Nov. 28 1944
Travelling Expenses \$ 17.00 : Received by me, 19.

Geo. Reddie
Surveyor to Lloyd's Register.

Committee's Minute. FEB. 9 FEB 1945

Assigned. + Lloyd's R.M.C. 11,44

