

REPORT ON REFRIGERATING MACHINERY AND APPLIANCES.

(Received at London Office

31 JUL 1941

Date of writing Report 9th July 1941 When handed in at Local Office 28: 7: 41 Port of Glasgow
No. in Reg. Book. Survey held at Glasgow Date: First Survey 11: 2: 41 Last Survey 41-7- 1941
88213 (No. of Visits 14)

on the Refrigerating Machinery and Appliances of the M/V "GLOUCESTER" Tons { Gross 6476
Net 3679
Vessel built at Linthouse, Glasgow By whom built Alexander Stephens & Sons Ltd Card No. 575 When built 1941
Owners New Zealand Shipping Co. Ltd. Port belonging to London Voyage
Refrigerating Machinery made by J. & E. Hall Ltd. Machine Nos. 10577 10578 When made 1941
Insulation fitted by Mercery Insulation Co. Ltd. When fitted 1941 System of Refrigeration CO₂ + Brine
Method of cooling Cargo Chambers Brine & Air Insulating Material used granulated cork
Number of Cargo Chambers insulated 16 Total refrigerated cargo capacity 268060 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:—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 _____ 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.

141137-T. (MADE IN ENGLAND.)



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Sounding Pipes, No. and position in each chamber situated below the load water line *two each hold*
 Diameter *2 1/2"* Are all sounding pipes in way of insulated chambers fitted in accordance with Section 3, Clause 11. *Yes*
 Are all wood linings tongued and grooved *Yes* 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 *to tank top - duraproof mixture; to deck - messaput mixture.*

Air Trunkways in Chambers. Are the arrangements satisfactory and in accordance with the approved plans *Yes*
 Are they permanently fixed or collapsible, or portable *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 *2"* Minimum thickness *3/16"* Are they galvanised externally *Yes*
 How are they arranged in the chambers *on roof - also sides in No 1 hold.*

Thawing Off, what provision is made for removing the snow from the cooling pipes in the chambers *Brine heater*

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 *Yes plan*
 (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

Kindly return approved plan to this office for use in dealing with Sister vessel.

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

To complete the survey the cooling and insulation tests require to be held. The Owners representative stated that this would be done at the first opportunity.

The Refrigerating appliances have been fitted under special survey and the materials and workmanship are good. The installation will be eligible in our opinion for Classification and Record of LLOYD'S R.M.C. with date upon satisfactory completion of the survey.

Job 28/7/41

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.
<i>2</i>	<i>4</i>	<i>Carlson J. & E. Hall Ltd.</i>	<i>1941</i>	<i>(1) Brine & Air (2) Fran Carb.</i>	<i>111</i>	<i>Yes</i>	<i>16</i>	<i>268060</i>	

London 9/49
 Fee *6/5* A/c £18 £27: 0: 0 { Fee applied for, 19
 Travelling Expenses £ : : { Received by me, 19

U. Davis. *A.W. Paterson*
 Surveyors to Lloyd's Register.

Committee's Minute **GLASGOW 29 JUL 1941**

Assigned *Deferred*

Noted
part survey
28/7/41

Vertical text on the left margin: Certificate to be sent to