

REPORT ON REFRIGERATING MACHINERY AND APPLIANCES.

(Received at London Office

FEB -6 1939

NEWCASTLE-ON-TYNE

Date of writing Report

19

When handed in at Local Office

1/2/39

Port of

No. in

Reg. Book. Survey held at

87760

Wallsend on Tyne

Date: First Survey

14 June 1938

Last Survey

21st Jan. 1939

(No. of Visits

32

on the Refrigerating Machinery and Appliances of the Q.S.M.V. Dominion Monarch Tons { Gross 27155
 Net 15813
 Vessel built at Wallsend on Tyne By whom built Swan Hunter & Wigham Richardson Ltd. Yard No. 1547 When built 1939
 Owners Shaw Savill & Albion Co. Ltd. Port belonging to Southampton Voyage
 Refrigerating Machinery made by J.E. Hall Ltd. Machine Nos. 9975-8 When made 1939
 Insulation fitted by Mersey Insulation Co. Ltd. When fitted 1939 System of Refrigeration CO₂ Brine
 Method of cooling Cargo Chambers Brine Cools & Air Insulating Material used Granulated Slab Cork
 Number of Cargo Chambers insulated 24 Total refrigerated cargo capacity 511960 cubic feet.

DESCRIPTION OF REFRIGERATING MACHINERY. Where placed on H Deck amidships

Refrigerating Units, No. of 4 No. of machines 4 Is each machine independent Yes
 Total refrigeration or ice-melting capacity in tons per 24 hours 224 tons Are all the units connected to all the refrigerated chambers Yes

Compressors, driven direct through single reduction gearing Compressors, single or double acting Single acting If multiple effect compression No
 are relief valves or safety discs fitted Yes No. of cylinders to each unit 2 Diameter of cylinders 5"

Diameter of piston rod 2 1/4" Length of stroke 10" No. of revolutions per minute 300/200

Motive Power supplied from Electric Motors Power supplied by Five 600KW. Oil Engine Dynamos
 (State number of boilers, oil engines or electric generators supplying the motive power.)

CO₂ machines

Steam Engines, high pressure, compound, or triple expansion, surface condensing. No. of cylinders 1 Diameter 6 1/2"
 Length of stroke ✓ Working pressure ✓ Diameter of crank shaft journals and pins Journals 6 1/2", pins 4" dia
 Breadth and thickness of crank webs 9" x 4 1/2" No. of sections in crank shaft One Revolutions of engines per minute 300 max.

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 type No. of 4 Rated 160 HP. Kilowatts ✓

Volts 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 ✓ Main wheel ✓

Pinion shafts, diameter at bearings ✓ Main wheel shaft, diameter at bearings ✓

Gas Condensers, No. of 4 Cast iron or steel casings 3 of Cast Iron Cylindrical or rectangular Cylindrical Are safety valves fitted ✓

to casings Yes No. of coils in each 3 with 14 Material of coils SD Copper 3/4" x 1 1/4" Can each coil be readily shut off or disconnected Yes

Water Circulating Pumps, No. and size of 2 - 225 tons/hour how worked Electrically Gas Separators, No. of 8

Gas Evaporators, No. of 4 Cast iron or steel casings Steel Pressure or gravity type pressure If pressure type, are safety

valves fitted ✓ No. of coils in each casing 13 Material of coils SD Steel 1" x 1 5/16" Can each coil be readily shut off or disconnected Yes

Direct Expansion or Brine Cooled Batteries, No. of 25 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 ✓ Material of coils SD Steel 1 1/2" bore Can each coil be readily shut off or disconnected ✓

disconnected Yes Total cooling surface of battery coils 25,600 sq. ft. Is a watertight tray fitted under each battery Yes

Air Circulating Fans, Total No. of 30 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

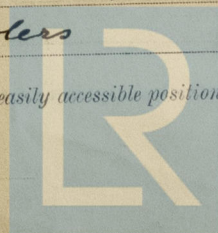
Brine Circulating Pumps, No. and size of, including the additional pump 7-6" vertical contrax how worked Electrically

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 list attached to London Report

totals = 59 for grids, 95 for coolers

Can each section be readily shut off or disconnected Yes Are the control valves situated in an easily accessible position Yes



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Sounding Pipes, No. and position in each chamber situated below the load water line *Usual double bottom sounding pipes & one in each hold to top of hold on tank top.*

Diameter *2 & 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 *none*

How is the expanded metal secured in place *✓*

How are the cork slabs secured to the steel structure of the vessel *patent Cement*

Air Trunkways in Chambers. Are the arrangements satisfactory and in accordance with the approved plans *Yes*

Are they permanently fixed or collapsible, or portable *wood trunking portable, permanent where metal at ship's sides & in overhead insulation.*

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" bore* Minimum thickness *Nº 7. WG* Are they galvanised externally *Yes*

How are they arranged in the chambers *Roof 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. *R Walsh*
for Messrs Insulation Co. Ltd. Builders.

Plans. Are approved Plans or Specifications forwarded herewith for the Refrigerating Machinery *✓* 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 *Complete*

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

*The materials and workmanship are good.
 The Requirements of the Society's Rules have been carried out
 & the vessel is, in our opinion, eligible to have the
 notation + Lloyd's RMC 1.39 recorded in the Register
 Book.*

*Note The report has been signed by the Insulation
 Contractors who are responsible to the Owners for
 the carrying out of the work.*

*It is submitted that
 this vessel is eligible for
 THE RECORD. + Lloyd's RMC 1.39*

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.
<i>4</i>	<i>8</i>	<i>Carb. Anhyd.</i>	<i>J & E Hall, Ld</i>	<i>1938</i>	<i>(1) Brine & Air (2) Steam & Cold Cork</i>	<i>Tons. 224</i>	<i>YES.</i>	<i>24</i>	<i>Rule 511960 minus 50280</i>

Fee *Nov. £32* *London 16* } £48: — { Fee applied for, *4 FEB 1939*
 Travelling Expenses £ : : { Received by me, *11.2.19 39*

H. J. Akster & A. Watt.
 Surveyors to Lloyd's Register.

Committee's Minute *TUE. 7 FEB 1939*

Assigned *+ Lloyd's RMC 1.39*

CERTIFICATE WRITTEN



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Certificate to be sent to: Newcastle-on-Tyne