

Rpt. 17.

REPORT ON REFRIGERATING MACHINERY AND APPLIANCES.

(Received at London Office)

14 NOV. 1925

Date of writing Report 6th Nov 1925 When handed in at Local Office 6th Nov 25 Port of Newcastle-on-Tyne
 No. in Reg. Book. Survey held at Walker Date: First Survey 12 May Last Survey 5th Nov 1925
21202 (No. of Visits)

on the Refrigerating Machinery and Appliances of the T.S.M.V. GRIPSHOLM Tons { Gross 17401
 Net 10457

Vessel built at Newcastle By whom built S. & W. Armstrong Yard No. 999 When built 1925
A/B Svenska Ameriska Linien

Owners Rederi Akt Selskapet Port belonging to Göteborg Voyage Göteborg
(A. Carlander & V.R. Olsson Mps)

Refrigerating Machinery made by J & B Hall & Co Machine No. When made

Insulation fitted by Newall & Co When fitted 1925 System of Refrigeration CO₂ Brine

Method of cooling Cargo Chambers Brine Pipes Insulating Material used Slab cork

Number of Cargo Chambers insulated 2 Total refrigerated cargo capacity 12008 cubic feet.

DESCRIPTION OF REFRIGERATING MACHINERY. Where placed See Lon report 24/11/24

Refrigerating Units, No. of ☒ Single, double, or triple 12 ton each machine Cubic feet of air delivered per hour

Total refrigeration or ice-melting capacity in tons per 24 hours 24 for two Are all the units connected to all the refrigerated chambers ☒

Compressors, driven direct or through ☒ single ☒ double reduction gearing. Compressors, single or double acting ☒ No. of cylinders ☒

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

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.

Are thermometers fitted to the outflow and to each return brine pipe ☒ Where the tanks are closed are they ventilated as per Rule ☒

Where the tanks are not closed is the compartment in which they are situated efficiently ventilated ☒

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

HYDRAULIC AND OTHER TESTS.

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	8/7. 14/8					
BRINE PIPING AFTER ERECTION IN PLACE.	20/9, 30/9/25	40 lb sq	<input checked="" type="checkbox"/>	90 lb sq	<input checked="" type="checkbox"/>	tight & sound

Cooling Test. Has the refrigerating machinery been examined under full working conditions, and found satisfactory ☒ *yes*
Dates of test 21st & 22nd October 1925 Density of Brine 52° by *Thaddeus* 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 -25.5° C. & -23° C.
+50° F. atmosphere 10° cooling water inlet and discharge 10° C & 14° C gas in condensers 15.5° and evaporators -30°
the average temperature of the refrigerated chambers -16° C and the rise of temperature in these chambers upon the expiration of 24 hours
time after the machinery and cooling appliances have been shut off -2° C per hour, -7 average for 24 hours

SPARE GEAR.

ARTICLES SUPPLIED AS PER RULE

ADDITIONAL SPARE GEAR SUPPLIED.

All the spare gear enumerated on London report, dated 12/12/24 has been examined on board.

C.M.

ARTICLES REQUIRED BY RULES AND NOT YET SUPPLIED ☒

The foregoing is a correct description of the Refrigerating Machinery. ☒



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Lloyd's Register
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DESCRIPTION OF INSULATION.

17. 23533

IN LOWER HOLD CHAMBERS.						IN TWEEN DECK CHAMBERS.				
	Air Space.	Outer Lining.	Non-conducting Material.	Thickness of ditto.	Inner Lining.	Air Space.	Outer Lining.	Non-conducting Material.	Thickness of ditto.	Inner Lining.
FRAME No. (Fore Peak) A										
FRAME No. 149 F						None	✓	Slab cork 3 @ 3" 1/2	NEWSULITE (CEM)	
FRAME No. 134 A						"	✓	" " 1 @ 4" 2 @ 3"	" " "	"
FRAME No. F										
FRAME No. A										
FRAME No. F										
FRAME No. A										
FRAME No. (Boiler Room) F										
FRAME No. (Engine Room) A										
FRAME No. F										
FRAME No. A										
FRAME No. F										
FRAME No. A										
FRAME No. F										
FRAME No. A										
FRAME No. (After Peak) F										
SIDES ...						None	✓	Slab cork 1 @ 4" 2 @ 3" 1/2	NEWSULITE (CEM)	
OVERHEADING ...						"	✓	" " 3 @ 3"	" " "	"
FLOORS OF CHAMBERS ...						"	✓	" " 2 @ 4"	1 1/2" ROUGH ASPHALT ON TOP	
TRUNK HATCHWAYS ...						✓				
THRUST RECESS, SIDES AND TOP ...						✓				
TUNNEL SIDES AND TOP ...						✓				
TUNNEL RECESS, FRONT AND TOP ...						✓				

FRAMES OR REVERSE FRAMES, FACE

6" x 2" wp.

BULKHEAD STIFFENERS, TOP

✓

BOTTOM

✓

AND FACE

6" x 2" wp.

RIBBAND ON TOP OF DECK

None

SIDE STRINGERS, TOP

✓

BOTTOM

✓

AND FACE

✓

WEB FRAMES, SIDES

✓

AND FACE

✓

✓

BRACKETS, TOP

✓

BOTTOM

✓

AND FACE

✓

INSULATED HATCHES, MAIN

✓

BILGE

✓

MANHOLE

✓

HATCHWAY COAMINGS, MAIN

✓

BILGE

✓

HOLD PILLARS

3" slab cork + 1/2" newsulite + 18 B.W.S. sheets.

MASTS

✓

VENTILATORS

1 @ 8" x 8" + 1 @ 16" x 4"

Are insulated plugs fitted to provide easy access to bilge suction roses

✓

tank, air, and sounding pipes

✓

heels of pillars

and manhole doors of tanks

✓

Are insulated plugs fitted to ventilators

yes

cargo ports

✓

and side lights

✓

Is the insulation of the lower hold floor and tunnel top in way of the hatchways protected

✓

if so, how

✓

Oil Storage Tanks, where adjacent to the insulated chambers, state what provision has been made for ventilating the air space between the insulation and the bulkhead plating. ✓

Coal Bunker Bulkheads, and Brine Outflow and Return Pipes passing through coal bunkers. Is the insulation, so far as practicable, fireproof? yes.

Where Cooling Pipes pass through watertight bulkheads or deck plating, are the fittings and packing of the stuffing boxes both watertight and fireproof? yes.

Cargo Battens, Dimensions and spacing, sides 2 1/2" x 1" up, sp. 2" floors 3" x 1/8" Amer. Elm 1/2" apart.

fixed or portable Portable Are screens fitted over the brine grids at chamber sides 10 hinged or permanently fixed

Thermometer Tubes, No. and position in each chamber 2 each chamber 10" for 146 frame

diameter 2 1/2" are they fitted in accordance with Section 3, Clause 8 yes.

Protection of Pipes. Are all pipes, including air and sounding pipes, which pass through or into insulated chambers, well insulated? yes.

Draining Arrangements. Where the chambers are situated below the load water line, what provision is made for draining the inside of the chambers?

2 1/2" diameter scupper Where sluices, scupper pipes, and drain pipes are fitted are means provided for blanking them off? yes.

What provision is made for draining the refrigerating machinery room? Scupper Scuppers.

brine return room ✓ fan room ✓ water circulating pump room ✓

Are all air spaces behind insulation arranged to drain to the bilges, bilge wells, or gutterways of the respective chambers? None.



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 *yes.*

Are all wood linings tongued and grooved ✓ Are cement facings reinforced with expanded steel lattice *yes.*

How is the expanded metal secured in place *By corrugated staples.*

How are the cork slabs secured to the steel structure of the vessel *pinned to wood grounds.*

Air Trunkways in Chambers, inside dimensions, main *None* and branch ✓

Are they permanently fixed or collapsible, or portable ✓ State position in chambers ✓

Where air trunkways pass through watertight bulkheads, are they fitted with watertight doors *none* 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* Are they galvanised externally *yes.*

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

Thawing Off, what provision is made for removing the snow from the cooling pipes in the chambers *Stem coils for heating circulating brine.*

For
SIR W. G. ARMSTRONG, WHITWORTH & CO. LTD.

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

H. G. Williams
GENERAL MANAGER, Builders.

Plans. Are approved Plans or Specifications forwarded herewith for the Refrigerating Machinery *No* 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 ✓

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

The refrigerating machines and their auxiliaries have been tested under working conditions, the temperatures of the chambers were taken at start and after 24 hours and the tests were satisfactory.

As the whole of the survey has been carried out under special survey, we are of opinion that the record RMC 11.25 be inserted in the register book.

London report now forwarded.

It is submitted that
this vessel is eligible for
THE RECORD. + Lloyd's RMC 11.25.

W.D. 17/11/25.

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.
2 Single	J & E Hall Ltd	1925	CO ₂ Carb. Amky.	Trane (1) Valve (2) Hall	Brine Salt water (Small + 1)	✓	24 for 2 machines	2	12000

Fee
Travelling Expenses

Fee applied for, 19
Received by me, 19

R. Langlands & Co. Purdick
Surveyor to Lloyd's Register.

Committee's Minute

FRI. 20 NOV 1925

Assigned

+ Lloyd's R.M.C. 11.25

CERTIFICATE WRITTEN



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