

Report on Refrigerating Machinery and Appliances.

Received at London Office 17 SEP 1947

Date of writing Report 16.9.1947 When handed in at Local Office 16.9.47 Port of GLASGOW.

No. in Reg. Book. Survey held at GLASGOW. Date: First Survey 8.1.47 Last Survey 15.9.1947
27888 (Number of Visits 25)

on the Refrigerating Machinery and Appliances of the M.V. "LA HEVE" Tons Gross 4027 Net 2224

Vessel built at GLASGOW. By whom built HARLAND & WOLFF. Yard No. 1345 G. When built 1947.

Owners LE MINISTRE DES TRAVAUX PUBLICS DU GOUVERNEMENT DE LA REPUBLIQUE FRANCAISE. Port belonging to NANTES. Voyage NORTH AFRICA TO FRANCE.

Refrigerating Machinery made by J. & F. HALL. LD. Machine Nos. When made 1946.

Insulation fitted by CORK INSULATION AND ASBESTOS CO. LD. When fitted WHILST BUILDING. System of Refrigeration AMMONIA.

Method of cooling Cargo Chambers BRINE & AIR. Insulating Material used SLAB & GRANULATED CORK.

Number of Cargo Chambers insulated 5. Total refrigerated cargo capacity 59,990 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:—Have they been made under survey. State of Report or Certificate.

Is each receiver, which can be isolated, fitted with a safety valve as per Rule.

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

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.

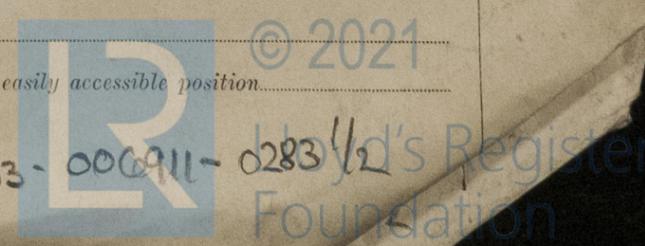
Can each section be readily shut off or disconnected. Are the control valves situated in an easily accessible position.

NOTE.—THE WORDS WHICH DO NOT APPLY SHOULD BE DELETED.

5c.2.46. (MADE AND PRINTED IN ENGLAND.)

R.M.C. No. 1746

SEE LONDON REPORT



006903-006911-0283/2's Register Foundation

Are thermometers fitted to the outflow and to each return brine pipe YES. Where the tanks are closed are they ventilated as per Rule YES.
 Where the tanks are not closed is the compartment in which they are situated efficiently ventilated. ✓
 Are the number and capacity of the machines and the number of pumps and sea connections in accordance with Section 2, Clause 1 of the Rules. YES
 Let the exhaust steam led to the main and auxiliary condensers.

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						
Multiple Effect Receivers						
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	12-9-17	20 lb/p"	90 lb/p"			

Have important steel castings and forgings been tested in accordance with the Rules YES
 Cooling Test. Has the refrigerating machinery been examined under full working conditions, and found satisfactory YES.
 Dates of test 15th Sept 1917. Density of Brine 48 by TWADDLE hydrometer
 Temperatures (when the cargo chambers are cooled down to the required test temperatures) of delivery and return air at direct expansion or brine-cooled batteries 17°C & -17°, outflow and return brine -25°C & -23.5°C
 atmosphere 15.7°C cooling water inlet and discharge 17°C & 19°C gas in condensers 29°C and evaporators -26°C.
 the average temperature of the refrigerated chambers N°6 HOLD CHAMBERS -15.5°C = 4.25°F and the rise of temperature in these chambers upon the expiration of _____ hours
N°3 HOLD CHAMBERS -6.7°C = 19.94°F
 time after the machinery and cooling appliances have been shut off. N°6 CHAMBERS -7°C = 19°F N°3 CHAMBERS -4.6°C = 8.2°F

SPARE GEAR.

Are the working parts of the machines, pumps and motors respectively, interchangeable
 Has the spare gear required by the Rules been supplied YES
 Additional Spare Gear Supplied: See Landing Report N°1746
All spare gear as stated in the above report has now been placed on board the vessel.

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

DESCRIPTION OF INSULATION.

	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. (Deck)										
Frame No.										
Frame No.										
Frame No.										
Frame No.										
Frame No. <u>N°3 Hold & TWEEN DKS</u>			<u>GRAN. CORK</u>	<u>9"</u>	<u>2 LAYERS 7/8" T.G. BOARDS WITH WATERPROOF PAPER</u>			<u>GRAN. CORK</u>	<u>9"</u>	<u>2 LAYERS 7/8" T.G. BOARDS WITH WATERPROOF PAPER.</u>
Frame No. <u>98</u>										
Frame No. <u>82</u>			<u>D°</u>	<u>0°</u>	<u>D°</u>			<u>D°</u>	<u>D°</u>	<u>D°</u>
Frame No. <u>16</u>								<u>SLAB CORK</u>	<u>8"</u>	<u>1/2" SPECIAL HARDCEMENT.</u>
Frame No. <u>11 & 13</u>								<u>D°</u>	<u>D°</u>	<u>D°</u>
Frame No. <u>4 & 0</u>								<u>D°</u>	<u>D°</u>	<u>D°</u>
Frame No. <u>2-0 AFT</u>								<u>D°</u>	<u>D°</u>	<u>D°</u>
Frame No. <u>0 F</u>								<u>D°</u>	<u>D°</u>	<u>D°</u>
Sides			<u>D°</u>	<u>D°</u>	<u>D°</u>			<u>GRAN. CORK.</u>	<u>9"</u>	<u>2 LAYERS 7/8" T.G. BOARDS WITH WATERPROOF PAPER.</u>
Overheading			<u>D°</u>	<u>10"</u>	<u>7/8" T.G. BOARDS WITH WATERPROOF PAPER</u>			<u>D°</u>	<u>10"</u>	<u>7/8" T.G. BOARDS WITH WATERPROOF PAPER.</u>
Floors of Chambers			<u>1/2" BITUMASTIC</u>	<u>7"</u>	<u>1 1/2" T.G. BOARDS</u>					
Tunnel Hatchways	<u>ADJACENT TO SHIPS SIDES AND BULKHEADS ONLY IN N°3 HOLD & LOWER T. DKS.</u>					<u>SIDES</u>				
Thrust Recess, Sides and Top	<u>N°6 T. DKS.</u>					<u>OVERHEADING LOWER T. DK. FLOOR OF CHAMBER UPPER T. DK.</u>				
Tunnel Sides and Top						<u>SLAB CORK. 10"</u>				
Tunnel Recess, Front and Top						<u>D° 11"</u> <u>D° 8"</u> <u>D°</u>				
Frames or Reverse Frames, Face	<u>IN ABOVE INSULATION</u>									
Bulkhead Stiffeners, Top	<u>IN ABOVE INSULATION.</u>					<u>Bottom IN ABOVE INSULATION.</u>				
Ribband on Top of Decks	<u>2" THICK O.P. AT SHIPS SIDES & ADJACENT TO BMS 82 & 98 ON 2ND & 3RD DECKS.</u>									
Side Stringers, Top	<u>AS FOR SIDES.</u>					<u>Bottom AS FOR SIDES.</u>				
Web Frames, Sides	<u>and Face</u>									
Brackets, Top	<u>IN ABOVE INSULATION</u>					<u>Bottom IN ABOVE INSULATION.</u>				
Insulated Hatches, Main	<u>6" GRAN. CORK & 7/8" & 5/8" T.G. BOARDS TOP & BOTTOM.</u>					<u>4" GRAN. CORK & 2 LAYERS 7/8" T.G. BOARDS TOP & BOTTOM. Manhole BOARDS TOP & BOTTOM.</u>				
Hatchway Coamings, Main	<u>PITCH PINE 6" TAPERED TO 3" WITH 3/16" GALV. FACE PLATE.</u>					<u>Bilge 9/4" & 4/8" TAPERED TO 3 1/2" SOLID PINE.</u>				
Hold Pillars	<u>INSULATED WITH CORDAGE</u>									
Masts	<u>Ventilators 4" SLAB CORK & 1/2" HARDCEMENT</u>									
Are insulated plugs fitted to provide easy access to bilge suction roses	<u>YES</u> tank, air, and sounding pipes <u>YES</u> heels of pillars <u>WELDED</u>									
and manhole doors of tanks	<u>YES</u> Are insulated plugs fitted to ventilators <u>YES</u> cargo ports <u>YES</u> and side lights <u>1 1/2" ELM. SUBSTITUTED FOR TOP LAYER OF T.G. BOARDS.</u>									
Is the insulation of the lower hold floor and tunnel top in way of the hatchways protected	<u>YES</u> if so, how <u>1 1/2" ELM. SUBSTITUTED FOR TOP LAYER OF T.G. BOARDS.</u>									
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.	<u>-</u>									
and for draining the tank top.	<u>No AIR SPACE.</u>									
Fireproof Insulation. Is the insulation and woodwork fireproof in way of bunkers or any surfaces exposed to excessive heat	<u>-</u> Where									
Cooling Pipes pass through watertight bulkheads or deck plating, are the fittings and packing of the stuffing boxes both watertight and fireproof	<u>YES</u> <u>HARD GRADINGS ON BARE STEEL DECK & IN N°6 TUNNEL TOP LOWER TW. DKS UNDER HATCH.</u>									
Cargo Battens, Dimensions and spacing, sides	<u>2" x 2" SPACED 12"</u> floors <u>STEEL DECK & IN N°6 TUNNEL TOP LOWER TW. DKS UNDER HATCH.</u>									
fixed or portable	<u>FIXED</u> Are screens fitted over the brine grids at chamber sides <u>YES</u> hinged or permanently fixed <u>FIXED</u>									
Thermometer Tubes, No. and position in each chamber.	<u>1 P.E.S. IN EACH CHAMBER.</u>									
diameter	<u>2 1/2"</u> are they fitted in accordance with Section 3, Clause 9 <u>YES</u>									
Protection of Pipes. Are all pipes, including air and sounding pipes, which pass through or into insulated chambers, well insulated	<u>YES</u>									
Draining Arrangements. What provision is made for draining the inside of the chambers	<u>2 1/2" SCUPPER P.E.S. IN EACH CHAMBER</u>									
Where sluices, scupper pipes, and drain pipes are fitted are means provided for blanking them off	<u>YES</u>									
What provision is made for draining the refrigerating machinery room	<u>DRAINS TO BILGE</u>									
brine return room	<u>YES</u> fan room <u>YES</u> water circulating pump room <u>-</u>									
Are all air spaces behind insulation arranged to drain to the bilges, bilge wells, or gutterways of the respective chambers	<u>YES</u>									

Sounding Pipes, No. and position in each chamber situated below the load water line. **1 (PES) To N° 3 HOLD BILGE.**
 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. **YES.**
 How is the expanded metal secured in place. **BY HAIRPIN STAPLES TO WOOD GROUNDS**
 How are the cork slabs secured to the steel structure of the vessel. **BEDDED IN BITUMEN & NAILED TO GROUNDS.**
 Air Trunkways in Chambers. Are the arrangements satisfactory and in accordance with the approved plans. **YES.**
 Are they permanently fixed or collapsible, or portable. **PERMANENTLY FIXED.**
 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. **YES.** Where are the doors worked from. **SHIPS SIDE DOORS FROM INSIDE.**
BULKHEAD DOORS N° 3 LOWER TW. DKS FROM BOTH SIDES.
PLUGS IN UPPER TW. DK BHD'S FROM OUTSIDE CHAMBERS.
 Cooling Pipes in Chambers, diameter. **N° 6 1 29/32"** Minimum thickness. **7 G.** Are they galvanised externally. **YES.**
 How are they arranged in the chambers. **ON FACE OF INSULATION IN N° 6 CHAMBERS.**
 Thawing Off, what provision is made for removing the snow from the cooling pipes in the chambers. **HOT GAS BY REVERSE CIRCULATION**
OR REFRIGERANT FOR N° 3 AIR COOLED SPACES. HOT BRINE FOR N° 6 GRID COOLED SPACES.
 The foregoing is a correct description of the Insulation and Appliances.

Builders.

Plans. Are approved Plans or Specifications forwarded herewith for the Refrigerating Machinery **N°** and Insulation. **NO. FORWARDED WITH PREVIOUS SISTER VESSEL "MORBIHAN"**
 (If not, state date of approval)
 Is the Refrigerating Machinery and Appliances duplicate of a previous case. **YES.** If so, state name of vessel. **"MORBIHAN" GLS. RPT 71902**
 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.) **See also London Report N° 1746**
The Refrigerating Machinery and Appliances have been satisfactorily installed on board the vessel under special survey.
The materials and workmanship are good.
The machinery has been tested under full working conditions and found in good order.
Testing tests were satisfactorily carried out and the installation is eligible in our opinion for classification with Record of LLOYD'S R.M.C. 9.47 N° 6 main and lower tween decks for temperatures -9.5°C (15°F) and all other chambers for temperatures 0°C (32°F).

It is submitted that the vessel is eligible for THE RECORD. + LLOYD'S RMC 9.47 N° 6 main & lower tween decks for temp. 15°F all other chambers for 32°F.

CERTIFICATE WRITTEN

L.Y. 19/9/47

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. Cubic ft.
3	6	AMMONIA	J & E HALL LTD. DARTFORD	1947	1) BAINE AIR 2) GRANITE SLAB CORK	57 Tons.	YES	5	59,990

LON. A/C £8:13:4
 Fee GLS A/C £17:6:8 £ 26: 0 : 0 (Fee applied for, 16.9.47.19
 Travelling Expenses £ : : Received by me, 19

Macmillan for H. Dickerson & Self. W. Russell
 Surveyors to Lloyd's Register.

Committee's Minute.

GLASGOW 1 SEP 1947

Assigned

Lloyd's RMC 9.47

N° 6 main & lower tween decks for temp -9.5°C (15°F) and all other chambers for temp 32°F

FRI. 2 APR 1948

Amend notation to + Lloyd's RMC for Mediterranean Temp. 32°F in h.w.3 space and 15°F in h.w.6 spaces.

W. Russell 16.2.48

Certificate to be sent to

1150

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