

REPORT ON REFRIGERATING MACHINERY AND APPLIANCES.

(Received at London Office.

24 MAR 1943

Date of writing Report

19

When handed in at Local Office

24 MAR 1943

Port of London.

No. in

Reg. Book.

Survey held at London

Date: First Survey

23rd Dec 42

Last Survey

19th March 1943

AT MNC. 23 APRIL 43

9 SEPT. 1943

(No. of Visits

10

(10 VISITS)

on the Refrigerating Machinery and Appliances of the M/S. RIPPINGHAM GRANGE Tons { GrossVessel built at Newcastle By whom built Hawthorn Leslie & Co. Ltd. Yard No. 653 When built 1942-3Owners Houlder Bros & Co. Ltd. Port belonging to

Voyage

Refrigerating Machinery made by J. & E. Hall Ltd. Machine Nos. 1158When made 1942-3

Insulation fitted by

When fitted

System of Refrigeration CO₂ + BrineMethod of cooling Cargo Chambers Air circulation + Brine grids Insulating Material usedNumber of Cargo Chambers insulated 55 32 Total refrigerated cargo capacity 585,000 cubic feet.DESCRIPTION OF REFRIGERATING MACHINERY. Where placed Upper deck port + Star hull shipRefrigerating Units, No. of 3 No. of machines 3 Is each machine independent yesTotal refrigeration or ice-melting capacity in tons per 24 hours 195 Are all the units connected to all the refrigerated chambers yesCompressors, driven direct or through single reduction gearing. Compressors, single or double acting Single If multiple effect compression noare relief valves or safety discs fitted yes No. of cylinders to each unit 2 Diameter of cylinders 5 3/8"Diameter of piston rod 2 1/4" Length of stroke 10" No. of revolutions per minute 300 max.Motive Power supplied from Four electric generators
(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

Length of stroke

Working pressure

Diameter of crank shaft journals and pins

6 1/2" jls. 4" pins.Breadth and thickness of crank webs 9" x 4 1/2" No. of sections in crank shaft one Revolutions of CO₂ mach. per minute 300/200Oil 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 riveled longitudinal joint

Material

Range of tensile strength

Working pressure by Rules

Electric Motors, type open with canopy No. of 3 Rated 185 B.H.P. KilowattsVolts 220 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 3 of 14 units each Cast iron or steel casings Copper Cylindrical or rectangular cylindrical Are safety valves fittedto casings on water headers No. of coils in each unit one Material of coils copper Can each coil be readily shut off or disconnected yesWater Circulating Pumps, No. and size of 2 - 8" west. centr. how worked elec. direct Gas Separators, No. of 6Gas Evaporators, No. of 3 Cast iron or steel casings steel Pressure or gravity type pressure If pressure type, are safetyvalves fitted sent pipes fitted No. of coils in each casing 15 Material of coils steel Can each coil be readily shut off or disconnected yesDirect Expansion or Brine Cooled Batteries, No. of 52 Are there two separate systems, so that one may be in use while the other is beingcleared of snow no No. of coils in each battery See sheet attached Material of coils Steel Can each coil be readily shut off ordisconnected yes Total cooling surface of battery coils 35,500 sq. ft. Is a watertight tray fitted under each battery yesAir Circulating Fans, Total No. of 55 each of 1 cubic feet capacity, at 1 revolutions per minuteSteam or electrically driven electrically Where spare fans are supplied are these fitted in position ready for coupling up noBrine Circulating Pumps, No. and size of, including the additional pump 5 - 6" west. centr. how worked elec. directBrine Cooling System, closed or open closed Are the pipes and tanks galvanised on the inside noNo. of brine sections in each chamber See list attachedCan each section be readily shut off or disconnected yes Are the control valves situated in an easily accessible position yes

Are thermometers fitted to the ^{common} outflow and to each return brine pipe yes 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 ✓

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

Is the exhaust steam led to the main and auxiliary condensers yes

DESCRIPTION OF INSULATION.

BULKHEADS.

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. 183 (Fore Peak)	A	-	-	-	-	✓	12 G. GAL. SHEET IRON.	GRANULATED CORK.	10"	-
FRAME No. 157	F	-	-	-	-	✓	14 G. G.S.I.	DO.	6 1/2"	-
	A	✓	14 G. GALV. S.I.	GRAN. CORK	10 1/2"	✓	14 G. G.S.I.	DO.	4"	-
FRAME No. 137	F	-	12 G. G.S.I.	DO.	DO.	-	12 G. G.S.I.	DO.	6 1/2"	-
	A	-	DO.	DO.	4"	-	DO.	DO.	4"	-
FRAME No. 111	F	-	14 G. G.S.I.	DO.	10 1/2"	-	14 G. G.S.I.	DO.	6 1/2"	-
	A	-	DO.	DO.	4"	-	DO.	DO.	4"	-
FRAME No. 88 (Boiler Room)	F	-	12 G. G.S.I.	DO.	10 1/2"	-	12 G. G.S.I.	DO.	10"	-
ENGINE	A	✓	14 G. G.S.I.	✓	3"	-	14 G. G.S.I.	-	-	-
FRAME No. 58-60 (Engine Room)	F	-	12 G. G.S.I.	"IDAGLASS"	12"	-	12 G. G.S.I.	"IDAGLASS"	12"	-
	A	-	12 G. G.S.I.	GRAN. CORK.	10"	-	14 G. G.S.I.	GRAN. CORK	4"	-
FRAME No. 33	F	-	12 G. G.S.I.	SLAB CORK	1 1/2"	-	14 G. G.S.I.	DO.	9 1/2"	-
	A	-	12 G. G.S.I.	DO.	DO.	-	DO.	DO.	DO.	-
FRAME No. ...	F	-	-	-	-	-	-	-	-	-
	A	-	-	-	-	-	-	-	-	-
FRAME No. ...	F	-	-	-	-	-	-	-	-	-
	A	-	-	-	-	-	-	-	-	-
FRAME No. 8-9 (After Peak)	F	-	14 G. G.S.I.	GRAN. CORK.	11 1/2"	-	12 G. G.S.I.	DO.	10"	-
IS ...	...	-	14 G. G.S.I.	DO.	10"	-	14 G. G.S.I.	DO.	11 1/2"	-
REHEADING ...	...	-	12 G. G.S.I.	DO.	10"	-	12 G. G.S.I.	DO.	10"	-
ORS OF CHAMBERS ...	...	-	1" x 1 1/4" T&G.	DO.	7"	BITUMEN	-	-	-	-
BUNK HATCHWAYS	...	...	...	...	...	✓	12 G. G.S.I.	DO.	11" to 4"	-
JUST RECESS, SIDES AND TOP	...	...	...	...	...	-	12 G. G.S.I.	SLAB CORK	1 1/2"	-
INEL SIDES AND TOP	...	...	...	...	...	-	12 G. G.S.I.	SILICATE COTTON	12"	-
INEL RECESS, FRONT AND TOP	...	...	...	...	...	-	DO.	DO.	DO.	-

FRAMES OR REVERSE FRAMES, FACE 2" SLAB CORK.

BULKHEAD STIFFENERS, TOP GRAN. CORK. BOTTOM GRAN. CORK. AND FACE GRAN. CORK. 1/2" MINIMUM

BAND ON TOP OF DECKS none

DE STRINGERS, TOP none BOTTOM ✓ AND FACE ✓

DE FRAMES, SIDES none AND FACE ✓

DECKS, TOP none BOTTOM ✓ AND FACE ✓

INSULATED HATCHES, MAIN 10" PLUG HATCHES 1 1/4" T&G. TOP & BTM. BILGE 9" PLUG HATCHES MANHOLE 9" PLUG HATCHES 1 1/4" T&G. TOP & BTM.

HATCHWAY COAMINGS, MAIN 11" O.P. BILGE 9" O.P.

OLD PILLARS 2" SISAL ROPE

STS 4" CORK 3/16" GALV. PLATING. VENTILATORS ✓

Are insulated plugs fitted to provide easy access to bilge suction roses YES tank, air, and sounding pipes YES heels of pillars NO.

Are manhole doors of tanks YES. Are insulated plugs fitted to ventilators NO. cargo ports YES. and side lights NO.

Is the insulation of the lower hold floor and tunnel top in way of the hatchways protected YES. if so, how 1 1/2" ELM.

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 ✓ steel Cofferdam fitted

and for draining the tank top SCUPPERS TO DRAIN HAT NO SCR. POCKET ONLY.

Fireproof Insulation. Is the insulation and woodwork fireproof in way of bunkers or any surfaces exposed to excessive heat No wood

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 ✓ floors ✓ tunnel top ✓

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

Thermometer Tubes, No. and position in each chamber Generally 4 each side (TOTAL 221)

diameter 2 1/2" GALV. W.I. 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.

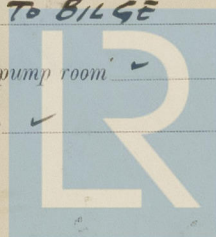
Draining Arrangements. What provision is made for draining the inside of the chambers 4 1/2" G.I. PIPE TO BILGE WITH U-BEND & CLACK TRAP AT END

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 (FLAT IN BR.) SCUPPERS TO BILGE

brine return room SCUPPERS TO BILGE 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 ✓



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Sounding Pipes, No. and position in each chamber situated below the load water line *none. Usual S.P. and bilge sounding pipes incorporated with shell - Blue Ins.*
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 *NONE*

How is the expanded metal secured in place *NONE*

How are the cork slabs secured to the steel structure of the vessel *3/8" stud bolts and hot bitumen*

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

Are they permanently fixed or collapsible, or portable *permanent*

Where air trunkways pass through watertight bulkheads, are they fitted with watertight doors *YES*

Are the door frames efficiently insulated *YES*

Are insulated plugs supplied for the doorways *YES*

Where are the doors worked from *BOTH SIDES*

Cooling Pipes in Chambers, diameter *1 1/2" GAL.*

Minimum thickness *1/4"*

Are they galvanised externally *YES*

How are they arranged in the chambers

BATTERIES IN AIR-COOLED CHAMBERS AND GRIDS IN BRINE COOLED CHAMBERS

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

STEAM HEATERS

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

J. Lowry for the Money Insulation Builders.

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

and Insulation *YES*

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 refrigerating machinery was constructed under special survey and the materials and workmanship are good and it will be eligible for the notation + Lloyds R.M.C. (with date) when the installation and testing have been satisfactorily completed.*

The refrigerating machinery has been satisfactorily installed on board the vessel & tested under working conditions & is eligible in our opinion, for the notation + Lloyds RMC 9.43.

J. D. Philston J. Munt.

+ Lloyds RMC 9.43

23 SEP 1943

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.
3	6	Cashbury	J. & E. Hall Ltd	1943	air + brine dry comp 5-cotton	195	Yes	32	585,000

Fee *London* £ *16* :- :-

Travelling Expenses £ :- :-

Fee applied for, *23 SEP 1943*

Received by me, 19

D. Gemmell.

Surveyor to Lloyd's Register.

Committee's Minute

TUES. 5 OCT 1943

Assigned

+ Lloyds RMC 9.43



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