

Report on Refrigerating Machinery and Appliances.

Received at London Office 25 MAY 1956

Date of writing Report 9-4-1956 When handed in at Local Office 9-4-1956 Port of Groningen

No. in Reg. Book. Survey held at Mardenshoek Date: First Survey 12-12-1955 Last Survey 16-3-1956

(Number of Visits 15)

on the Refrigerating Machinery and Appliances of the ms. HOLMGALEN Tons (Gross 484.62 Net 201.48)

Vessel built at Mardenshoek By whom built Rederij Scheepwerf Yard No. 415 When built 1956

Owners Stoom Shipping Co Bda Port belonging to Wellington Voyage —

Refrigerating Machinery made by Highford Ref. Co. Ltd. Machine Nos. E 31859/60 When made 1956

Insulation fitted by Messrs de Boer When fitted 1956 System of Refrigeration direct expansion

Method of cooling Cargo Chambers dry air cooling Insulating Material used carb.

Number of Cargo Chambers insulated one Total refrigerated cargo capacity 6000 cubic feet

DESCRIPTION OF REFRIGERATING MACHINERY. Where placed deck house midships

Refrigerating Units, No. of 2 No. of machines 2 Is each machine independent yes

Total refrigeration or ice-melting capacity in tons per 24 hours 48 Are all the units connected to all the refrigerated chambers yes

Compressors, driven direct through V-belts reduction gearing. Compressors, single or double acting single If multiple effect compression no

Are relief valves or safety discs fitted yes No. of cylinders to each unit 2 Diameter of cylinders 3 1/4"

Diameter of piston rod H-shape Length of stroke 3 3/4" No. of revolutions per minute 370

Motive Power supplied from 2 generators @ 40 kW, 1 @ 20 kW, 1 @ 16.5 kW.
(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 No. 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 Cons 745 g. No. of 2 Rated 3.7 Kilowatts 220 Volts~~

~~at 1500 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 2 Cast iron or steel casings. cast steel Cylindrical or rectangular cylindrical Are safety valves fitted~~

~~to casings yes No. of coils in each. Material of coils brass Can each coil be readily shut off or disconnected yes~~

~~Water Circulating Pumps, No. and size of pumps available 1 @ 1 1/2" how worked electric 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 2 Are there two separate systems, so that one may be in use while the other is being~~

~~cleared of snow yes No. of coils in each battery 60 Material of coils steel Can each coil be readily shut off or~~

~~disconnected yes Total cooling surface of battery coils 645.8 sq ft Is a watertight tray fitted under each battery yes~~

~~Air Circulating Fans, Total No. of 2 each of 176575 cubic feet capacity, at 1550 revolutions per minute~~

~~Steam or electrically driven electrically Where spare fans are supplied are these fitted in position ready for coupling up yes~~

~~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.



Vertical text on the left margin, including 'This Certificate is...', 'When the Com...', 'understand that...', 'incurred in any...', 'for the error of...', 'to the Society.', 'Cert. B. I. 1000', and '2nd. 12. 17. (MADE AND PRINTED IN ENGLAND.)'

Arc 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.
 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.

HYDRAULIC AND OTHER TESTS.

DESCRIPTION.	Date of Test.	Working Pressure.	Hydraulic Test Pressure.	Air Test Pressure.	Stamped.	REMARKS.
Engine Cylinders (if tested)						
Gas Compressors	18.10.55		300 lbf	200 lbf	JSP	
„ Separators						
„ Multiple Effect Receivers	2-1-56		25 kg	14.5 kg	JSP	
„ Condenser Coils	18.10.55		350 lbf	200 lbf	JSP	
„ 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						

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 15/16-3-56 Density of Brine by 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 & , outflow and return brine & atmosphere cooling water inlet and discharge & gas in condensers and evaporators the average temperature of the refrigerated chambers and the rise of temperature in these chambers upon the expiration of hours time after the machinery and cooling appliances have been shut off

SPARE GEAR.

Are the working parts of the machines, pumps and motors respectively, interchangeable yes
 Has the spare gear required by the Rules been supplied yes
 Additional Spare Gear Supplied:

The foregoing is a correct description of the Refrigerating Machinery.
 Manufacturer RODEWES' SCHIEPERSWERYEN N.V.
 Manufacturer.

DESCRIPTION OF INSULATION.

25 MAY 1956

	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				Timber					
Frame No. 28	F		cash	150 mm	2x19 mm					
	A									
Frame No. 44	F		cash	150	2x19					
	A									
Frame No.	F									
	A									
Frame No. (Boiler Room)	F									
	A									
Frame No. (Engine Room)	F									
	A									
Frame No.	F									
	A									
Frame No.	F									
	A									
Frame No. (After Peak)	F		cash	180 mm	2x19 mm					
Sides			"	"	"					
Overheading			"	"	"					
Floors of Chambers			cash	150 mm	concrete 100 mm					
Trunk Hatchways								cash	200 mm	timber 1x19 mm
Thrust Recess, Sides and Top										
Tunnel Sides and Top										
Tunnel Recess, Front and Top										

Frames or Reverse Frames, Face Δ 127 x 75 x 8
 Bulkhead Stiffeners, Top 100 x 75 x 8 Bottom and Face
 Ribband on Top of Decks
 Side Stringers, Top Bottom and Face
 Web Frames, Sides frame 318.39 - 400 x 9 and Face flange 200 x 13
 Brackets, Top 355 x 255 x 7 Bottom and Face
 Insulated Hatches, Main Macgregor Bilge 25 cm wood Manhole 25 cm wood
 Hatchway Coamings, Main 450 x 10 Bilge
 Hold Pillars
 Masts Ventilators
 Are insulated plugs fitted to provide easy access to bilge suction roses yes tank, air, and sounding pipes yes keels of pillars and manhole doors of tanks yes 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 yes 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
 and for draining the tank top
 Fireproof Insulation. Is the insulation and woodwork fireproof in way of bunkers or any surfaces exposed to excessive heat Where
 Cooling Pipes pass through watertight bulkheads or deck plating, are the fittings and packing of the stuffing boxes both watertight and fireproof
 Cargo Battens, Dimensions and spacing, sides all wood floors 50 x 25 galij tunnel top
 fixed or portable portable Are screens fitted over the brine grids at chamber sides hinged or permanently fixed
 Thermometer Tubes, No. and position in each chamber 4, in each corner of chamber 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. What provision is made for draining the inside of the chambers 2 drain pipes to approved plan
 Where sluices, scupper pipes, and drain pipes are fitted are means provided for blanking them off
 What provision is made for draining the refrigerating machinery room
 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

Sounding Pipes, No. and position in each chamber situated below the load water line *one on each side aft*
 Diameter *1 1/2"* Are all sounding pipes in way of insulated chambers fitted in accordance with Section 3, Clause 11 *-*
 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 *-*
 How are the cork slabs secured to the steel structure of the vessel *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 *permanently*
 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 *Battery Room 1 1/4"* Minimum thickness *2 1/2 mm* Are they galvanised externally *yes*
 How are they arranged in the chambers *-*
 Thawing Off, what provision is made for removing the snow from the cooling pipes in the chambers *circulation of ambient air over air cooling battery*
 The foregoing is a correct description of the Insulation and Appliances.

BODENBERG & CO. REFRIGERATION E.R.
W. Bodewig Builders.

Plans. Are approved Plans or Specifications forwarded herewith for the Refrigerating Machinery *17. 11. 55* and Insulation *17. 11. 55*
 (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.)
This installation was constructed and fitted under special survey in accordance with the approved plans, Society's Rules and Surveyor's letter. The workmanship was found good. The machinery has been tested under full working conditions and found working satisfactorily. An insulation test was held to satisfaction. In my opinion the machinery merits the approval of the Committee and be recorded in the Society's Register Book + Lloyd's RMC 3-56.

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.				Tons.	No.
2	2	direct diffusion	Rightport Refrig. Co. Ltd	1956	direct exp. each stage	48	yes	1	6000

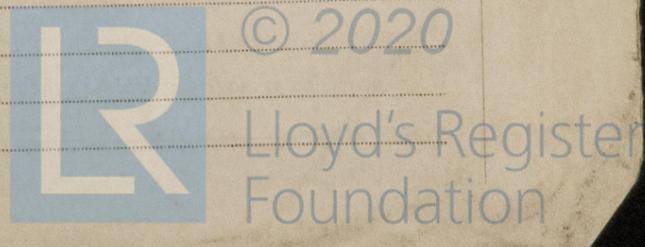
Fee *£ 250.-* (Fee applied for *23-5-1956*)
 Travelling Expenses *£ 74.-* (Received by me *19*)

J. J. Johnson
 Surveyor to Lloyd's Register.

Committee's Minute *TUESDAY 24 JULY 1956*

Assigned *+ Lloyd's RMC 3.56*
to maintain temp. 30°F with sea temp 86°F maximum.

CERTIFICATE WRITTEN.



Certificate sent to *25th July 56*