

Rpt. 17.

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Report on Refrigerating Machinery and Appliances.

Received at London Office

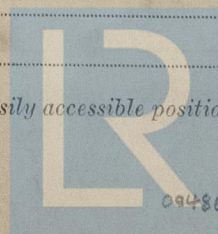
Date of writing Report 17th Aug. 1945 When handed in at Local Office 13th Aug. 1945 Port of MONTREAL, QUE.No. in Reg. Book. Survey held at MONTREAL, QUE. Date: First Survey 25th May Last Survey 28th July 19 45
(Number of Visits 10)on the Refrigerating Machinery and Appliances of the S. S. "CABEDELLO" Tons { Gross 3142.34
Net 1818.16Vessel built at MONTREAL, QUE. By whom built Canadian Vickers Ltd. Yard No. 211 When built 1945Owners LLOYD BRASILEIRO (Patrimonio Nacional) Port belonging to Rio de Janeiro Voyage -Refrigerating Machinery made by York Machinery Corporation Machine Nos. 4 T L A-425 When made 1945
installed by Canadian Ice Machine Co.Insulation fitted by Canadian Cork Co. When fitted 1945 System of Refrigeration C C 12 F2 (Freon 12)Method of cooling Cargo Chambers Direct Expansion Coils Insulating Material used Granulated CorkNumber of Cargo Chambers insulated FOUR (4) Total refrigerated cargo capacity 15,800 cubic feet

DESCRIPTION OF REFRIGERATING MACHINERY. Where placed In Bridge Space, Starboard side

Refrigerating Units, No. of TWO No. of machines TWO Is each machine independent YesTotal refrigeration or ice-melting capacity in tons per 24 hours 9.5 tons Are all the units connected to all the refrigerated chambers Yes
by Electric MotorCompressors, driven by Electric Motor through Belt Compressors, single or double acting Single of multiple effect compression -Are relief valves or safety discs fitted Yes No. of cylinders to each unit 3 Diameter of cylinders 4"Diameter of piston rod None Length of stroke 4" No. of revolutions per minute 650Motive Power supplied from 3 - 15 K W Electric Generators, Steam Driven
(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 Compound wound, drip proof No. of Two Rated 15 Kilowatts 115 Voltsat 1750 revolutions per minute. Diameter of motor shafts at bearings 1 7/8"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 Two Cast iron or steel casings Steel Cylindrical or rectangular Cylindrical Are safety valves fittedto casings Yes No. of tubes in each 76 Material of tubes Cupro-Nickel Can each coil be readily shut off or disconnected -Water Circulating Pumps, No. and size of pumps available 2.15 galls/min. how worked Direct connected to 3/4 H P Electric Motors Gas Separators, No. of -Gas Evaporators, Coils Cast iron or steel casings - Pressure or gravity type pressure If pressure type, are safetyvalves fitted Yes No. of coils in each chamber 5 Material of coils Steel Can each coil be readily shut off or disconnected YesDirect Expansion or Brine Cooled Batteries, No. of - Are there two separate systems, so that one may be in use while the other is beingcleared of snow - No. of coils in each battery - Material of coils - Can each coil be readily shut off ordisconnected - 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 minuteSteam 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.

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HYDRAULIC AND OTHER TESTS.

Have important steel castings and forgings been tested in accordance with the Rules No (See General Remarks)

Cooling Test. Has the refrigerating machinery been examined under full working conditions, and found satisfactory Yes

Dates of test 27th & 28th July, 1945 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 86° F. cooling water inlet and discharge 72° F. & 84° F. gas in condensers 94° F. and evaporators - 6° F.

the average temperature of the refrigerated chambers 9° F and the rise of temperature in these chambers upon the expiration of 12 hours time after the machinery and cooling appliances have been shut off 15° F.

The foregoing is a correct description of the Refrigerating Machinery. For York Corporation
per Canadian Ice Machine Co. Ltd. Manufacturer.

IN LOWER HOLD CHAMBERS.

IN 'TWEEN DECK CHAMBERS.

Frames or Reverse Frames, Face 7" cork, and 2-3/4" T & G inner lining

Bulkhead Stiffeners, Top 12" Cork & T & G Lining Bottom 12" Cork & T & G Lining and Face 7" Cork & 2 3/4" T & G Lining

Ribband on Top of Decks -

Side Stringers, Top - Bottom - and Face -

Web Frames, Sides - and Face -

Brackets, Top 12" cork & T & G Lining Bottom 12" Cork & T & G Lining and Face 3" Cork & 2 3/4" T & G Lining

Insulated Hatches, Main - Bilge - Manhole -

Hatchway Coamings, Main - Bilge -

Deck Pillars 10" Gran. Cork with 3/4" T & G Fir lining, double

Masts - Trunk Ventilators 10" Gran. Cork with 3/4" T & G Fir lining, double

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 - 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 Air Pipes P.S. to Bridge Deck

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 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"x2"x12" spacing floors Wood gratings 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. 1 to each chamber near centre, also 2 dial thermometers and 1 max-min. thermometer in each 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 1/2" scupper pipes, led overboard from U. Deck, storm valves fitted

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 Scuppers

Drainage 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 -
Diameter - 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 -
How is the expanded metal secured in place -
How are the cork slabs secured to the steel structure of the vessel -
Air Trunkways in Chambers. Are the arrangements satisfactory and in accordance with the approved plans -
Are they permanently fixed or collapsible, or portable -
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" Minimum thickness .133" Are they galvanised externally Yes
How are they arranged in the chambers. Evaporator Coils arranged on sides, ends and overhead
Thawing Off, what provision is made for removing the snow from the cooling pipes in the chambers. Hot Gas Defrosting Line

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

For CANADIAN VICKERS LIMITED.

J. Kirkland
(J. KIRKLAND) SHIPYARD MANAGER

Builders.

Plans. Are approved Plans or Specifications forwarded herewith for the Refrigerating Machinery No and Insulation New York
(If not, state date of approval) 19.1.45
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.) This REFRIGERATING MACHINERY and APPLIANCES have been installed on board this Vessel in conformity with the Society's Rules and Regulations, and the materials and workmanship are satisfactory.

The cooling tests have been carried out with satisfactory results and it is recommended that the Notation of LLOYD'S R M C 7,45 be made in the Register Book in the case of this Vessel.

Copies of Certificates for Condensers, Receivers, Storage Tank, Evaporator Coils and Makers Shop Tests of Electric Motors enclosed herewith. Plan of Arrangement enclosed.

The Compressors for this Vessel were not surveyed during construction. The Makers state that these Compressors were submitted to their usual test of 150 lbs./square inch at their Works.

On arrival here, they were opened up, examined and afterwards tested by 350 lbs. oil pressure in the presence of the undersigned, and found satisfactory. The remaining parts of the appliances were examined and tested, and all surveyed during installation, as required by the Rules, with satisfactory results, and it is submitted for the consideration of the Committee, that the distinguishing mark + may be noted in the REGISTER BOOK in the case of this Vessel -

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.
Two	Two	C C L2 F2 (Freon 12)	York Ice Machinery Corp.	1945	(1) Direct Expansion (2) Gran. Cork	Tons. 9.5	Yes	4	Cubic ft. 15800

Fee £ 135⁰⁰ Fee applied for, 10th Sept. 1945

Travelling Expenses £ Included Received by me, 19

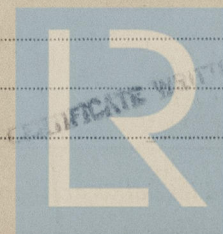
in Hull Rpt.

FRI. 12 OCT. 1945

Committee's Minute

Assigned

Lloyd's Rule 7.45



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