

Report on Refrigerating Machinery and Appliances.

Date of writing Report 23-5-51 When handed in at Local Office 6-6-51 Received at London Office 12 JUL 1951

No. in Reg. Book. Survey held at GENOA Date: First Survey 19-4-51 Last Survey 17-5-51 (Number of Visits 11)

on the Refrigerating Machinery and Appliances of the TRIPLE SC. STEAMER BRASIL NOW HOMELAND Tons { Gross 10,043 Net 5789

Vessel built at GLASGOW By whom built A. STEPHEN & SONS Yard No. When built 1905-4

Owners MEDITERRANEAN LINES INC. Port belonging to PANAMA Voyage NEW YORK-BREMEN-HAMBURG

Refrigerating Machinery made by THE FRICK CO WAYNESBORO PA U.S.A Machine Nos. 47289 47316 When made CIRCA 1947

Insulation fitted by UNKNOWN When fitted UNKNOWN System of Refrigeration BRINE

Method of cooling Cargo Chambers BRINE GRIDS Insulating Material used CHARCOAL

Number of Cargo Chambers insulated 4 IN TWEEN DECK Total refrigerated cargo capacity 10,290 cubic feet

FREON

DESCRIPTION OF REFRIGERATING MACHINERY. Where placed ENG RM FLAT OFF ENG CASING STARBD SIDE AFT

Refrigerating Units, No. of TWO No. of machines TWO Is each machine independent YES

Total refrigeration or ice-melting capacity in tons per 24 hours 15 SHORT TONS Are all the units connected to all the refrigerated chambers YES

Compressors, driven direct or through single } reduction gearing. Compressors, single or double acting S.A. If multiple effect compression NO

Are relief valves or safety discs fitted RELIEF VALVES No. of cylinders to each unit SIX Diameter of cylinders 4 3/8"

Diameter of piston rod Length of stroke 4 1/4" No. of revolutions per minute 500

Motive Power supplied from 3 SINGLE ENDED SCOTCH BOILERS FOR AUX. PURPOSES W.P. 180 LBS/SQ IN (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 ONE Diameter 180 mm

Length of stroke 155 mm Working pressure 180 LBS/SQ IN Diameter of crank shaft journals and pins 70 mm x 75 mm

Breadth and thickness of crank webs 100 mm x 38 mm No. of sections in crank shaft ONE Revolutions of engines per minute 500

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 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 TWO Cast iron or steel casings BRASS Cylindrical or rectangular CYLINDRICAL Are safety valves fitted

to casings YES No. of coils in each 76-5/8 186 79/30 CN. Material of coils 70/30 CN. Can each coil be readily shut off or disconnected

Water Circulating Pumps, No. and size of pumps available AS FOR CO₂ PLANT how worked Gas Separators, No. of TWO

Gas Evaporators, No. of TWO Cast iron or steel casings STEEL Pressure or gravity type PRESSURE If pressure type, are safety

valves fitted YES No. of coils in each casing 44-3/4 166 Material of coils STEEL Can each coil be readily shut off or disconnected NO

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

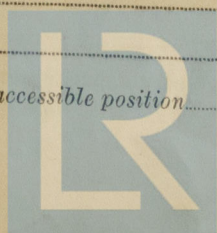
Steam or electrically driven Where spare fans are supplied are these fitted in position ready for coupling up

Brine Circulating Pumps, No. and size of, including the additional pump AS FOR CO₂ PLANT how worked

Brine Cooling System, closed or open Are the pipes and tanks galvanised on the inside

No. of brine sections in each chamber AS FOR CO₂ PLANT

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



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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.....
 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.....
 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						
„ 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...						

EXISTING PLANT.

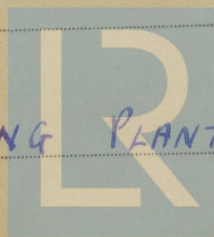
Have important steel castings and forgings been tested in accordance with the Rules.....
 Cooling Test. Has the refrigerating machinery been examined under full working conditions, and found satisfactory.....
 Dates of test.....17/18-5-51.....Density of Brine.....30°.....by.....BAUMÉ.....hydrometer
 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.....-14°C & -12°C
 atmospheric.....25°C.....cooling water inlet and discharge.....16°C & 18°C.....gas in condensers.....31°C.....and evaporators.....-15°C
 the average temperature of the refrigerated chambers.....-6°C 21°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.....5½°C

SPARE GEAR.

Are the working parts of the machines, pumps and motors respectively, interchangeable.....
 Has the spare gear required by the Rules been supplied.....
 Additional Spare Gear Supplied:— FOR FREON MACHINES. FRICK CORP. WAYNESBORO, PA. U.S.A.
 Crank Shaft - 1
 Oil Indicator Valve - 1
 Piston Rings - 4 sets
 Compressor Bolt End Bearings - 2
 Crankcase Gasket Pipes - 1 set.
 External Discharge Valves - 20
 Internal " " - 20
 Suction " " - 20
 Crankshaft gas seal - 1
 White metal ring for above - 1
 Thermometers - 4
 Receiver Valves - 2
 Cylinder covers - 1
 Piston - 1
 Safety Valve - 1
 " " Spring - 1
 Disc Valves - 2
 Oil Scraper Ring - 1
 Compressor main bearing - 2.
 Flexible joints - 1
 Pins for above - 50
 Intermediate discharge - 1
 Pist. Disch Valve chest complete - 1.
 Freon Compressor Steam engine spare parts.
 Main bearing - 2
 Crank " - 1
 Gudgeon Pins - 2
 Crosshead Bearings - 1
 Crosshead shippers - 2
 Main bearing nuts - 2
 Special packing - 6 sets
 " Tools - 5.

The foregoing is a correct description of the Refrigerating Machinery.

EXISTING PLANT.



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