

REPORT ON REFRIGERATING MACHINERY AND APPLIANCES.

(Received at London Office)

1 JUL 1927

Date of writing Report 28/6/27 When handed in at Local Office 28/6/27 Port of GENOA
 No. in Reg. Book. Survey held at GENOA Date: First Survey May 25th Last Survey June 8th 1927
 (No. of Visits Three)

the Refrigerating Machinery and Appliances of the T.S.S. "CONTE GRANDE" Tons { Gross.....
 Net.....
 Vessel built at Trieste By whom built Stab. Tecnico Triestino Card No. 764 When built 1927
 Owners LLOYD SABAUDO Port belonging to Genoa Voyage.....
 Refrigerating Machinery made by J. & E. Hall Machine No. 5185 When made 1920 (Stated)
5189
 Insulation fitted by..... When fitted..... System of Refrigeration CO Hall
2
 Method of cooling Cargo Chambers Brine Insulating Material used.....
 Number of Cargo Chambers insulated..... Total refrigerated cargo capacity..... cubic feet.

DESCRIPTION OF REFRIGERATING MACHINERY. Where placed

Refrigerating Units, No. of Two Single, double, or triple Single Cubic feet of air delivered per hour.....
 Total refrigeration or ice-melting capacity in tons per 24 hours 30 Are all the units connected to all the refrigerated chambers.....
 Compressors, driven direct ~~double~~ ^{single} Compressors, single or double acting Double No. of cylinders 2-1 per Machine
 Diameter of cylinders 4 inch Diameter of piston rod 2" Length of stroke 9" No. of strokes per minute 240
(120 R.P.M.)
 Motive Power supplied from Boilers
 Steam Engines, high pressure, ~~double~~ surface condensing. No. of cylinders 1 per Machine Diameter 12"
 Length of stroke 9" Working pressure 180 lb. Diameter of crank shaft journals and pins 5"
 Breadth and thickness of crank webs 7"x2-3/4" & 2-1/2" No. of sections in crank shaft One Revolutions of engines per minute 120
 Oil Engines, type..... 2 or 4 stroke cycle..... Single or double acting.....
 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.....
 Electric Motors, type..... No. of..... Rated..... Kilowatts.....
 Volts at..... revolutions per minute. Diameter of motor shafts at bearings.....
 Reduction Gearing, maximum shaft horse power at 1st pinion..... Revolutions per minute at full power at 1st pinion.....
 2nd pinion..... 1st reduction wheel..... main shaft..... Pitch circle diameter, 1st pinion..... 2nd pinion.....
 1st reduction wheel..... Main wheel..... Width of face, 1st reduction wheel..... Main wheel.....
 Distance between centres of pinion and wheel faces and the centre of the adjacent bearings, 1st pinion..... 2nd pinion.....
 1st reduction wheel..... Main wheel..... Flexible pinion shafts, diameter 1st..... 2nd.....
 Pinion shafts, diameter at bearings, External, 1st..... 2nd..... Internal, 1st..... 2nd.....
 Diameter at bottom of teeth of pinion, 1st..... 2nd..... Wheel shafts, diameter at bearings, 1st.....
 Main..... Diameter at wheel shroud, 1st..... Main.....
 Gas Condensers, No. of Two Cast iron or steel casings Cast iron Cylindrical or rectangular rectangular
 No. of coils in each 3 Material of coils Copper Can each coil be readily shut off or disconnected Yes
 Water Circulating Pumps, No. and size of 1 each machine how worked By main shaft Gas Separators, No. of Two
7"Diar. x 6" Stroke Pressure or gravity type Pressure
Steel
 Gas Evaporators, No. of Two Cast iron or steel casings..... Can each coil be readily shut off or disconnected Yes
 No. of coils in each casing Five Material of coils Iron
 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 3 Lamont 4-1/2x5x6 how worked Steam
 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.....

Where the tanks are not closed is the compartment in which they are situated efficiently ventilated

Steam Condensing Plant. *State what provision is made for condensing steam, in terms of Section 4, Clauses 13 and 14*

HYDRAULIC AND OTHER TESTS.

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

*Dates of test*_____ **Density of Brine**_____ *by*_____ *hydrometer*_____

Temperatures *(when the cargo chambers are cooled down to the required test temperatures)* of air at the snow box and of the return air_____ & _____,
or, 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.

ARTICLES REQUIRED BY RULES AND NOT YET SUPPLIED

The foregoing is a correct description of the Refrigerating Machinery.

Manufacturer.

DESCRIPTION OF INSULATION.

FRAMES OR REVERSE FRAMES, FACE		
BULKHEAD STIFFENERS, TOP	BOTTOM	AND FACE
RIBBAND ON TOP OF DECKS		
SIDE STRINGERS, TOP	BOTTOM	AND FACE
WEB FRAMES, SIDES	AND FACE	
BRACKETS, TOP	BOTTOM	AND FACE
INSULATED HATCHES, MAIN	BILGE	MANHOLE
HATCHWAY COAMINGS, MAIN	BILGE	
HOLD PILLARS		
MASTS	VENTILATORS	
<i>Are insulated plugs fitted to provide easy access to bilge suction roses</i> _____ <i>tank, air, and sounding pipes</i> _____ <i>heels of pillars</i> _____ <i>and manhole doors of tanks</i> _____ <i>Are insulated plugs fitted to ventilators</i> _____ <i>cargo ports</i> _____ <i>and side lights</i> _____ <i>Is the insulation of the lower hold floor and tunnel top in way of the hatchways protected</i> _____ <i>if so, how</i> _____		

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*

Coal Bunker Bulkheads, and Brine Outflow and Return Pipes *passing through coal bunkers. Is the insulation, so far as practicable, fireproof*

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* _____ *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 _____

diameter _____ are they fitted in accordance with Section 3, Clause 8 _____

Protection of Pipes. *Are all pipes, including air and sounding pipes, which pass through or into insulated chambers, well insulated*

Draining Arrangements. Where the chambers are situated below the load water line, what provision is made for draining the inside of the chambers

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.

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. 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, inside dimensions, main and branch.

Are they permanently fixed or collapsible, or portable. State position in chambers.

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. Are they galvanised externally.

How are they arranged in the chambers.

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

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

Builders.

Plans. Are approved Plans or Specifications forwarded herewith for the Refrigerating Machinery and Insulation (If not, state date of approval).

Is the Refrigerating Machinery and Appliances duplicate of a previous case. 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.) The refrigerating machinery has been opened up, examined and found in apparently new condition.

In my opinion the vessel will be eligible for the Record Lloyd's R.M.C. (With date) when the installation has been satisfactorily completed on board, and tried under working conditions.

PARTICULARS TO BE ENTERED IN REGISTER BOOK.

REFRIGERATING MACHINES.					System of (1) Refrigerating (2) Insulating the Chambers.	POWER.		INSULATED CARGO CHAMBERS.	
No. and whether Single or Duplex.	Makers.	Date of Construction.	System.	Type.		Cubic feet of air delivered per hour.	Ice melting capacity per 24 hours. Tons.	No.	Capacity.
2 Single	J. & E. Hall		CO ₂	Hall	Brine		30		

Fee Genoa Lit: 450.00 Fee applied for, 24/6/ 27.

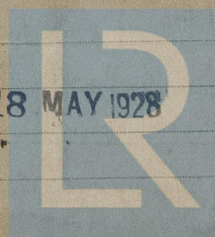
Traveling Expenses £ :50.00 Received by me, 16.8 19 27

Committee's Minute

FRI 23 MAR 1928

Assigned

FRI. 18 MAY 1928



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Foundation