

REPORT ON REFRIGERATING MACHINERY AND APPLIANCES.

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 (No. of Visits 13)

on the Refrigerating Machinery and Appliances of the SCREW VESSEL C.R.D.A.-YARD N.1741-42-47
 Vessel built at TRIESTE By whom built CANTIERI RIUNITI DELL'ADRIATICO Yard No. 1747 When built
 Owners Port belonging to Voyage
 Refrigerating Machinery made by ODERO TERNI ORLANDO STABILIMENTO TERMOMECCANICA Machine Nos. 33395/97 When made 1948
 Insulation fitted by When fitted System of Refrigeration CO₂
 Method of cooling Cargo Chambers AIR CIRCULATING Insulating Material used
 Number of Cargo Chambers insulated Total refrigerated cargo capacity cubic feet.

DESCRIPTION OF REFRIGERATING MACHINERY. Where placed

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 26.4 Are all the units connected to all the refrigerated chambers

Compressors, driven direct or ~~through~~ reduction gearing. Compressors, single or double acting DOUBLE If multiple effect compression YES

Are relief valves or safety discs fitted YES No. of cylinders to each unit 2 Diameter of cylinders 60 mm

Diameter of piston rod 30 mm Length of stroke 120 mm No. of revolutions per minute 400

Motive Power supplied from

(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:—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 riveted longitudinal joint Material Range of tensile strength Working pressure by Rules

Electric Motors, type D.40 No. of 2 Rated 33 Kilowatts 220

Volts at 1200 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 STEEL TUBES MULTITUBULAR 8 elements Are safety valves fitted

to casings YES No. of tubes in each element 7 Material of tubes COPPER Can each coil be readily shut off or disconnected No

Water Circulating Pumps, No. and size of pumps available N°2-20 mc/h/ how worked electrically Gas Separators, No. of 2

Gas Evaporators, No. of 2 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 4 Material of coils STEEL Can each coil be readily shut off or disconnected No

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 2 Material of coils STEEL Can each coil be readily shut off or

disconnected YES Total cooling surface of battery coils 420 sq. Is a watertight tray fitted under each battery YES

Air Circulating Fans, Total No. of 1 each of 500 mc/h/ cubic feet capacity, at 1900 revolutions per minute

Steam or electrically driven electrically 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 N°2 - 13 mc/h. how worked electrically

Brine Cooling System, closed or open closed Are the pipes and tanks galvanised on the inside No

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



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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 **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)	9.10.48	85 Kg/cm ²	210 Kg/cm ²	105 Kg/cm ²	D.G.	
GAS COMPRESSORS	13.12.48	85	210	105		
SEPARATORS	20.7.48	85	210	105		
MULTIPLE EFFECT RECEIVERS	24.7.48	85	210	105		
CONDENSER COILS	26.8.48	85	210	105		
EVAPORATOR COILS	1.10.48	85	210	105		
CONDENSER HEADERS AND CONNECTIONS	26.8.48	85	210	105		
CONDENSER CASINGS	26.8.48	85	210	105		
EVAPORATOR CASINGS	2.9.48	85	210	105		
NH ₃ CONDENSER, EVAPORATOR AND AIR COOLER COILS AFTER ERECTION IN PLACE	2.9.48	85	210	105		
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 ☒

Dates of test **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

atmosphere cooling water inlet and discharge outflow and return brine and 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

Additional Spare Gear Supplied:-

TO BE SUPPLIED AT TRIESTE

The foregoing is a correct description of the Refrigerating Machinery.

ODERO - TERMI - ORLANDO
per la costruzione di tutti i macchinari ed impianti
STABILIMENTO TERMOMACCHINARI

Manufacturer.

DESCRIPTION OF INSULATION.

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									
FRAME NO.	F									
FRAME NO.	A									
FRAME NO.	F									
FRAME NO.	A									
FRAME NO.	F									
FRAME NO. (Boiler Room)	A									
FRAME NO. (Engine Room)	A									
FRAME NO.	F									
FRAME NO.	A									
FRAME NO.	F									
FRAME NO.	A									
FRAME NO.	F									
FRAME NO.	A									
FRAME NO. (After Peak)	F									
SIDES										
OVERHEADING										
FLOORS OF CHAMBERS										
TRUNK HATCHWAYS										
THRUST RECESS, SIDES AND TOP										
TUNNEL SIDES AND TOP										
TUNNEL RECESS, FRONT AND TOP										

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	

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

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 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. 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. 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

Minimum thickness

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

Is the Refrigerating Machinery and Appliances duplicate of a previous case

YES

If so, state name of vessel

and Insulation

C.R.D.A. YARD N°1741-1742

SEEGENOA REP. N. 16824 & 16893

If the survey is not complete, state what arrangements have been made for its completion and what remains to be done

Plan of Riser
Plan of Cury
Prof. Sand

General Remarks (State quality of workmanship, opinions as to class, &c.)

THE REFRIGERATING MACHINERY AND APPLIANCES HAVE BEEN CONSTRUCTED UNDER SPECIAL SURVEY OF TESTED MATERIALS AND THEY ARE IN ACCORDANCE WITH THE APPROVED PLANS SECRETARY'S LETTERS AND RULE REQUIREMENTS.

THE MATERIAL AND WORKMANSHIP ARE GOOD - THESE PARTS ARE NOW BEEN DESPATCHED TO TRIESTE TO BE FITTED ON BOARD, AT ONE OF THE MESSR C.R.D.A. YARD 1741/42/47. ON THE SATISFACTORY COMPLETION THE INSTALLATION WILL BE ELEGIBLE FOR THE NOTATION IN THE SOCIETY'S REGISTER BOOK LLOYD'S R.M.C. (WITH DATE) FOR TEMPERATURE 34°F.

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.
2	2	CARB AMH	ODERO TERMI ORLANDO STABIL. TERMOMECCANICA	1948	AIR CIRCULATING	26.4	YES	-	-

Fee Lit. 40,000. =
Car Exps. fund" 2,400. =
Travelling Expenses 10,000. =
Revenue Tax.. 1,572. =

Fee applied for, 22/1/ 1949.

Received by me, 19

Committee's Minute

FRI 11 FEB 1949

Assigned

Deferred not

Same

Surveyor to Lloyd's Register.



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