

Report on Refrigerating Machinery and Appliances.

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on the Refrigerating Machinery and Appliances of the M/S "SOMMEN". Tons (Gross 3927 Net 2608)

Vessel built at Richmond, Cal. By whom built Kaiser Cargo Inc. Yard No. 68 When built 1945

Owners Rederi A/B Sigyn Port belonging to Helsingborg Voyage -

Refrigerating Machinery made by General Electric Machine Nos. 44700211/-212/-247/-249. 1945

Insulation fitted by - When fitted 1945 System of Refrigeration Direct expansion

Method of cooling Cargo Chambers Direct expansion Insulating Material used Spun Glass

Number of Cargo Chambers insulated 3 Total refrigerated cargo capacity 9830 cubic feet

DESCRIPTION OF REFRIGERATING MACHINERY. Where placed 2nd deck starboard aft

Refrigerating Units, No. of 4 No. of machines 4 Is each machine independent Yes

Total refrigeration or ice-melting capacity in tons per 24 hours 13.0 tons Are all the units connected to all the refrigerated chambers Yes

Compressors, driven ~~XXXXXX~~ through ^{single} ~~XXXXXX~~ reduction gearing. Compressors, single or double acting Single multiple effect compression

Are relief valves or safety discs fitted - No. of cylinders to each unit 2 Diameter of cylinders 4"

Diameter of piston rod - Length of stroke 4" No. of revolutions per minute 2 a 680

Motive Power supplied from Electric driven; Motive power from 2 x 250 KW generator.

(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 Electr. Mach. MFG. Comp./Type T No. of 4 Rated 2 fwd 7 1/2 aft 10 HP 240 Volts

at Aft 1310/1750. Fwd 1750 revolutions per minute. Diameter of motor shafts at bearings 10 HP=1.10/16". 7 1/2 HP=1.4/16"

Reduction Gearing Belt driven 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 4 Cast iron or steel casings Cast iron Cylindrical or rectangular Cylindrical Are safety valves fitted

to casings Yes No. of coils in each - Material of tubes Brass Can each coil be readily shut off or disconnected -

Water Circulating Pumps, No. and size of pumps available 1 a 187 t/h (main circ. pumps) 2 a 22.7 t/h how worked El. driven Gas Separators, No. of 4

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 ~~XXXXXX~~ Batteries, No. of 16 8 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 - Material of coils Galv. steel Can each coil be readily shut off or

disconnected Yes Total cooling surface of battery coils - Is a watertight tray fitted under each battery batter.

Air Circulating Fans, Total No. of 8 each of 1900 cubic feet capacity, at 1140 revolutions per minute

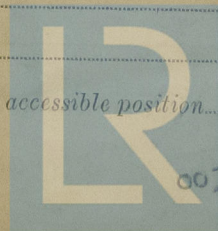
Steam or electrically driven Electrically Where spare fans are supplied are these fitted in position ready for coupling up Yes

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 -



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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...						

Have important steel castings and forgings been tested in accordance with the Rules.....

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

Dates of test..... Density of Brine..... by..... hydrometre.....

Temperatures (when the cargo chambers are cooled down to the required test temperatures) of delivery and return air at direct expansion or brine cooling

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:.....

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. 124	F		Spun Glass	11" ✓	2x1" & 2" plywood	3"	-	Spun Glass	10" ✓	2x1" & 2" plywood
Frame No. 136 (After Peak)	F	-	-	9" ✓	-	-	-	-	9" ✓	-
des ...	-	-	-	10" ✓	-	-	-	-	10" ✓	-
overheading ...	-	-	-	9" ✓	-	-	-	-	10" ✓	-
doors of Chambers ...	-	-	-	8" ✓	-	-	-	-	6" ✓	-

bulk Hatchways	-		-	11" ✓	-
bulkhead Recess, Sides and Top	-		-	8" ✓	4 1/2" wood & asphalt.
tunnel Recess 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 Plug hatch 7" insul.	-	Bilge	-	Manhole
hatchway Coamings, Main Wood with galv. stl. pl	-	Bilge	-	

old Pillars	-			
asts	-	Ventilators	-	
are insulated plugs fitted to provide easy access to bilge suction roses	No	/ bilges		
and manhole doors of tanks	None	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	Yes	if so, how	4 1/2"	Wood lining and asphalt

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	2" ventilating pipe p. & s.			
and for draining	1 1/2" drain pipe p. & s.			

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	Yes			
cargo Battens, Dimensions and spacing, sides	1.3/4"x3.1/2"; 9" in way of air.exp.coils. Elsewhere			
red or portable	Fixed	Are screens fitted over the brine grids at chamber sides	-	hinged or permanently fixed
thermometer Tubes, No. and position in each chamber	One in centre of lower chamber. One at side of each upper chamber. One distance thermometer in each chamber.			
diameter	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	Upper hold p. & s. 2x2 1/2" drains in each Lower hold 6x2 1/2" drains.			
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	Drained to Engine Room.			
ine 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	Drained to E.R.			

The foregoing is a correct description of the Refrigerating Machinery.

Manufact

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