



Are thermometers fitted to the <sup>lower</sup> ~~out~~ and ~~return~~ <sup>NH<sub>3</sub></sup> pipes yes Where the tanks are closed are they ventilated as per Rule yes  
 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 yes

HYDRAULIC AND OTHER TESTS.

DESCRIPTION.	Date of Test.	Working Pressure.	Hydraulic Test Pressure.	Air Test Pressure.	Stamped.	REMARKS.
ENGINE CYLINDERS (IF TESTED)						
GAS COMPRESSORS	26-6-42	185 lb. □	600 lb. □	350 lb. □	OK	
SEPARATORS	31-7-42	24-7-42	do.	500 lb. □	OK	
CRANKCASES	26-6-42	7-7-42	32 lb. □	300 lb. □	OK	
MULTIPLE EFFECT RECEIVERS	10-7-42	17-7-42	none			
CONDENSER COILS	14-7-42	24-7-42	185 lb. □	1500 lb. □	OK	
EVAPORATOR COILS (AIR COOLERS)	23-6-42	3-7-42	do.	do.	OK	
CONDENSER HEADERS AND CONNECTIONS	24-7-42	do.	do.	do.	OK	
CONDENSER CASINGS	31-7-42	10-15 lb. □	30 lb. □	✓	OK	
EVAPORATOR CASINGS						
NH <sub>3</sub> 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 yes  
**Cooling Test.** Has the refrigerating machinery been examined under full working conditions, and found satisfactory  
 Dates of test 26-6-42 31-7-42 24-7-42 15-9-42 19-6-42 7-7-42 10-7-42 14-7-42 23-6-42 3-7-42 24-7-42 31-7-42  
 Density of Brine 1.080 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 &  
 atm. sphere 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:** 3 main bearings for Comps, 1 Comp's Cyl's Cover, 3 sets gland packing  
 2 oil sight glasses, 2 drip feed sight glasses, 1/2 doz safety discs, 1 NH<sub>3</sub> gauge, 1 gauge valve  
 1 crankshaft, 2 springs for water relief valve, 2 thermometers  
 1 set dies for 1" x 2" pipe, 1 set Vee belts, 1 set Comps joints, 2 sets other NH<sub>3</sub> joints  
 1 plunger for forced lubrication pump, 2 pairs NH<sub>3</sub> flanges, 1 fitted box for parts  
 1 impeller shaft for circulating water pump  
**FOR STEAM ENGINES.** 2 sets H.P. piston rings  
2 " L.P. " "  
2 " Governor Springs  
2 " Springs for piston rings  
 Sundry Springs, 2 oil pump strainers, gauges  
2 sets metallic packing wearing parts H.P. piston rod  
2 " " " " L.P. " "  
2 " " " " " valve rod  
2 sets of center points  
1 pair of crank pin bearings  
1 pair crosshead bearings  
1 set main bearings  
1 case for above.  
**ELECTRICAL SPARES.**  
Water Pump Motor  
1 Armature (packed)  
1 set bearings  
1 set field coils  
1 set interpole coils  
1 line brush holder  
1 set carbon brushes  
1 set controller spares  
Tan Motors each size  
1 complete motor  
2 sets carbon brushes  
1 set controller spares

The foregoing is a correct description of the Refrigerating Machinery.  
 J. Loggins  
 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.
BULKHEADS.										
FRAME No. (Fore Peak)	A									
FRAME No.	F									
FRAME No.	A									
FRAME No.	F									
FRAME No.	A									
FRAME No. (Boiler Room)	F									
FRAME No. (Engine Room)	A									
FRAME No.	F									
FRAME No.	A									
FRAME No.	F									
FRAME No.	A									
FRAME No.	F									
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										
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										
<b>Oil Storage Tanks,</b> 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										
<b>Fireproof Insulation.</b> Is the insulation and woodwork fireproof in way of bunks or any surfaces exposed to excessive heat										
Where <b>Cooling Pipes</b> pass through watertight bulkheads or deck plating, are the fittings and packing of the stuffing boxes both watertight and fireproof										
<b>Cargo Battens,</b> Dimensions and spacing, sides floors tunnel top										
fixed or portable Are screens fitted over the brine grids at chamber sides hinged or permanently fixed										
<b>Thermometer Tubes,</b> No. and position in each chamber										
diameter are they fitted in accordance with Section 3, Clause 8										
<b>Protection of Pipes.</b> Are all pipes, including air and sounding pipes, which pass through or into insulated chambers, well insulated										
<b>Draining Arrangements.</b> 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 *1 1/2 inches* 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

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 was constructed under special survey and the materials and workmanship were good and it will be eligible for the notation + Lloyds R.M.C. (with date) when the installation and testing have been satisfactorily completed.*

**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.				Tons.	No.
2	4	Ammonia	J. & E. Hall Ltd.	1942	0 Air	72		4	244,000

Fee *Low as 17* £ 14 : 0 : 0 } Fee applied for, 2/9/1942  
Travelling Expenses £ : : } Received by me, 19

*D. Gemmell,*  
Surveyor to Lloyd's Register.

Committee's Minute

FRI. 30 OCT 1942

Assigned.

See minute on Lrk 22042



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Foundation