

Report on Refrigerating Machinery and Appliances.

Received at London Office

17 OCT 1951

Date of writing Report *4/7/51* 19... When handed in at Local Office *4/7/51* 19... Port of *London*
No. in Reg. Book. Survey held at *London* Date: First Survey *16 January* Last Survey *19 June* 19 *51*
(Number of Visits *11*)

on the Refrigerating Machinery and Appliances of the... Tons {Gross... Net...
Vessel built at *Glasgow* By whom built *Fairfield SBlo* Yard No. *753* When built *1951*
Owners... Port belonging to... Voyage...
Refrigerating Machinery made by *J & E Hall Ltd* Machine Nos. *14601/2/3* When made *1951*
Insulation fitted by... When fitted... System of Refrigeration *FI2*
Method of cooling Cargo Chambers... Insulating Material used...
Number of Cargo Chambers insulated... Total refrigerated cargo capacity *55,000* cubic feet

DESCRIPTION OF REFRIGERATING MACHINERY. Where placed

Refrigerating Units, No. of *3* ✓ No. of machines *3* ✓ Is each machine independent *Yes*
Total refrigeration or ice-melting capacity in tons per 24 hours *34 1/2* ✓ Are all the units connected to all the refrigerated chambers *Yes*
Compressors, driven *direct* or through *single* *terrope* reduction gearing. Compressors, single or double acting *single* If multiple effect compression *No*
Are relief valves or safety discs fitted *Yes* No. of cylinders to each unit *2* ✓ Diameter of cylinders *6 1/2"* ✓
Diameter of piston rod *trunk pistons* Length of stroke *5"* ✓ No. of revolutions per minute *500* ✓
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 *3 journals, 2 5/8" pins*
Breadth and thickness of crank webs *2 5/8 x 3 1/2 oval* 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 *Single* 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 *3* ✓ Cast iron or steel casings *steel* ✓ Cylindrical or rectangular *cylindrical* Are safety valves fitted
to casings *no* No. of coils in each *80* ✓ Material of coils *Yorkalloy* ✓ Can each coil be readily shut off or disconnected *no*

Water Circulating Pumps, No. and size of pumps available *✓* how worked *✓* Gas Separators, No. of *✓*
Gas Evaporators, No. of *3* ✓ Cast iron or steel casings *steel* ✓ Pressure or gravity type *pressure* If pressure type, are safety
valves fitted *filled* No. of coils in each casing *100* ✓ Material of coils *Brass* ✓ Can each coil be readily shut off or disconnected *no*

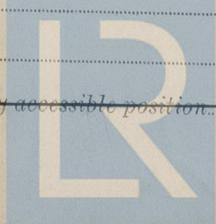
Direct Expansion or Brine Cooled Batteries, No. of... Are there two separate systems, so that one may be in use while the other is being
cleared of snow... No. of coils in each battery... Material of coils... Can each coil be readily shut off or
disconnected... Total cooling surface of battery coils... 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... 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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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..... 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 and appliances of this vessel have been constructed under special survey in conformity with the Society's Rules Regulations and the Secretary's letters. The scantlings and arrangements are in accordance with those shown on the approved plans. The materials and workmanship are good.
 In my opinion the Refrigerating machinery and appliances of this vessel will be eligible for the notation $\frac{1}{2}$ LLOYDS RMC (with date) when the installation and testing have been satisfactorily completed and the spare gear verified

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.
3	6	Freon	J & E Hall	1951		34.5	Yes		

Fee £ : : (Fee applied for, 19.....
 Travelling Expenses £ : : (Received by me, 19.....
 Signature: *Indelic*
 Surveyor to Lloyd's Register.

Committee's Minute..... GLASGOW 16 OCT 1951
 ACCOMPANYING MACHINERY REPORT
 Assigned.....



Certificate to be sent to