

Report on Refrigerating Machinery and Appliances.

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Date of writing Report 27 May 1957. When handed in at Local Office 30 May 1957. Port of GREENOCK.

No. in Reg. Book. Survey held at GREENOCK. Date: First Survey 15th October 1956 Last Survey 2nd May 1957.

91677 (SUPPLEMENT)

(Number of Visits DURING)

CONSTRUCTION.

on the Refrigerating Machinery and Appliances of the AYRESHIRE Tons (Gross 9340.99 Net 8301.97)

Vessel built at GREENOCK. By whom built GREENOCK DOCKYARD CO LTD Yard No. 488. When built 1957.

Owners CLAN LINE STEAMERS LTD Port belonging to GLASGOW. Voyage ✓

Refrigerating Machinery made by J. & E. HALL LTD. Machine Nos. 14893/4/5 When made 1956.

Insulation fitted by MULLAGH INSULATION & ENG. LTD. When fitted 1957. System of Refrigeration R.12.

Method of cooling Cargo Chambers BRINE & AIR. Insulating Material used E. S. 18 COOK.

Number of Cargo Chambers insulated 13. Total refrigerated cargo capacity 378,950 cubic feet.

DESCRIPTION OF REFRIGERATING MACHINERY. Where placed TWEEN DECK FLAT AT STAR SIDE OF E. ROOM CASING.

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. Are all the units connected to all the refrigerated chambers YES

Compressors, driven direct or through 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 8 Diameter of cylinders ✓

Diameter of piston rod. Length of stroke. No. of revolutions per minute MAX. 1000.

Motive Power supplied from FOUR 300K.W. DIESEL DRIVEN GENERATORS (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 E. V. D. P. No. of THREE Rated CONTINUOUS Kilowatts 85.8 Volts 220

at 1000 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. YES No. of coils in each. Material of coils. Can each coil be readily shut off or disconnected No

Water Circulating Pumps, No. and size of pumps available 3-200T./HR. how worked MOTOR DRIVEN Gas Separators, No. of THREE

Gas Evaporators, No. of 3 Cast iron or steel casings STEEL Pressure or gravity type PRESSURE If pressure type, are safety

Discs fitted YES No. of coils in each casing. Material of coils. Can each coil be readily shut off or disconnected No.

Direct Expansion or Brine Cooled Batteries No. of 20 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 6 WITH 6 Material of coils STEEL Can each coil be readily shut off or

disconnected YES Total cooling surface of battery coils 48,500 S.F. Is a watertight tray fitted under each battery YES

Air Circulating Fans, Total No. of 18 each of 2-10500 C.F.M. cubic feet capacity, at 2025 R.P.M. revolutions per minute

Steam or electrically driven ELECTRIC Where spare fans are supplied are these fitted in position ready for coupling up No

Brine Circulating Pumps, No. and size of, including the additional pump 5-17,500 GALL./HR. EACH how worked MOTOR DRIVEN

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

No. of brine sections in each chamber NONE.

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 *To HOLD SILGES ONLY - 2, AT AFTER END EACH HOLD*
Diameter *2 1/2* Are all sounding pipes in way of insulated chambers fitted in accordance with *Section 3, Clause 11* *YES.*

Are all wood linings tongued and grooved *—* Are cement facings reinforced with expanded steel lattice *NONE.*

How is the expanded metal secured in place *NONE.*

How are the cork slabs secured to the steel structure of the vessel *TANK TOP COVERED WITH BRUYEN & SLAB CORK Laid ON TOP.*

Air Trunkways in Chambers. Are the arrangements satisfactory and in accordance with the approved plans *YES - AS APPROVED.*

Are they permanently fixed or collapsible, or portable *PERMANENTLY FIXED.*

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 *NONE.* 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 *STEAM BRINE HEATER INSTALLED.*

The foregoing is a correct description of the Insulation and Appliances. *Geo. Lang*
103, NORTH BRIDGE, GLASGOW, W.4. Builders.

Plans. Are approved Plans or Specifications forwarded herewith for the Refrigerating Machinery *YES.* and Insulation *YES.*

Is the Refrigerating Machinery and Appliances duplicate of a previous case *YES.* If so, state name of vessel *'ARCYLLSHIRE' 1940 NO. 186*

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

SURVEY COMPLETE

General Remarks (State quality of workmanship, opinions as to class, &c.) *The Refrigerating Machinery, Appliances and Insulation of this ship has been constructed and installed under special survey in accordance with the Rules and approved plans.*

The materials and workmanship are good.

The installation has been tried under working conditions and a satisfactory balance test was carried out.

The spare gear has been checked on board.

*The Refrigerating Machinery and appliances of this ship are eligible in our opinion to have the notation of * R.M.C. S.57, to maintain temperature 15°F. with sea temperature 90°F. maximum.*

Copy of Intern. Certificate and Approved Plans herewith.

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.				No.	Capacity.
3.	24.	DICHLORODIFL. + UOROMETHANE.	J. & E. HALL.	1957.	① BONE L-AIR. ② FINE GLASS E-SLAB CORK.	Tons. 129.	YES.	13.	378,956

CONSTRUCTION £60 : 11 : 0
Fee INSULATION £113 : 5 : 0
Machinery Installation £67 : 17 : 0
Travelling Expenses £ : :
Fee applied for, 10th MAY 1957
Received by me, 19
G. Munson, & Alexander F. Moore & William F.
Surveyors to Lloyd's Register.

Assigned + Lloyd's R.M.C. S.57 to maintain temp. 15°F with sea temp. 90°F max.
wrote CRW
NOTED FOR RECORDING 20
Lloyd's Register Foundation