

## REPORT ON REFRIGERATING MACHINERY AND APPLIANCES.

(Received at London Office)

OCT 10 1940

Date of writing Report 5th Oct 1940 When handed in at Local Office 7th Oct/40 Port of Glasgow  
 No. in Reg. Book. 87257 Survey held at Glasgow Date: First Survey 6.5.40 Last Survey 1st Oct 1940  
 (No. of Visits 8 Eight)  
 on the Refrigerating Machinery and Appliances of the S.S. BURNSIDE Tons { Gross 5659 Net 3280  
 Vessel built at Glasgow By whom built Barclay Curle & Co Yard No. 676 When built 1940  
 Owners Burns Philp & Co Port belonging to Glasgow Voyage ✓  
 Refrigerating Machinery made by J & C. Hall, Ltd. Machine Nos. 10491 When made 1940  
 Insulation fitted by Donald - Bean When fitted 1940 System of Refrigeration CO<sub>2</sub> Brine  
 Method of cooling Cargo Chambers Brine Grids Insulating Material used Slab Gran Cork  
 Number of Cargo Chambers insulated 7 Total refrigerated cargo capacity 39,105 cubic feet.  
 Last Report No. 1152 Port Lon

## DESCRIPTION OF REFRIGERATING MACHINERY. Where placed

Refrigerating Units, No. of \_\_\_\_\_ No. of machines \_\_\_\_\_ Is each machine independent \_\_\_\_\_  
 Total refrigeration or ice-melting capacity in tons per 24 hours \_\_\_\_\_ Are all the units connected to all the refrigerated chambers \_\_\_\_\_  
 Compressors, driven direct or through <sup>single</sup> { reduction gearing. Compressors, single or double acting \_\_\_\_\_ If multiple effect compression <sup>double</sup> {  
 are relief valves or safety discs fitted \_\_\_\_\_ No. of cylinders to each unit \_\_\_\_\_ Diameter of cylinders \_\_\_\_\_  
 Diameter of piston rod \_\_\_\_\_ Length of stroke \_\_\_\_\_ No. of revolutions per minute \_\_\_\_\_  
 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 \_\_\_\_\_ 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 \_\_\_\_\_ Cast iron or steel casings \_\_\_\_\_ Cylindrical or rectangular \_\_\_\_\_ Are safety valves fitted \_\_\_\_\_  
 to casings \_\_\_\_\_ No. of coils in each \_\_\_\_\_ Material of coils \_\_\_\_\_ Can each coil be readily shut off or disconnected \_\_\_\_\_  
 Water Circulating Pumps, No. and size of \_\_\_\_\_ how worked \_\_\_\_\_ Gas Separators, No. of \_\_\_\_\_  
 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 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 \_\_\_\_\_

NOTE.—THE WORDS WHICH DO NOT APPLY SHOULD BE DELETED.

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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. ✓ Laid 6 Frounds.

Air Trunkways in Chambers. Are the arrangements satisfactory and in accordance with the approved plans. ✓

Are they permanently fixed or collapsible, or portable. ✓ 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. ✓ 1 1/2" Minimum thickness. ✓ 7 SWS. Are they galvanised externally. ✓

How are they arranged in the chambers. ✓ on sides & Top.

Thawing Off, what provision is made for removing the snow from the cooling pipes in the chambers. ✓ Brine Heater.

The foregoing is a correct description of the Insulation and Appliances.

for Ronald Bean & Co. Builders.

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

Is the Refrigerating Machinery and Appliances duplicate of a previous case. ✓ No 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. ✓ Complete.

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

The materials and workmanship are good.  
The refrigerating machinery and appliances have been  
fitted under special survey, tried under working conditions  
and found satisfactory.  
The installation is, in our opinion, eligible for classification  
and the record + LLOYD'S R.M.C. 9,40

Noted  
10/10/40.

GRB  
7/10/40

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.
						Tons.			Cubic ft.
2	2	Carbide	J. & C. Kalle, Ltd.	1940	(1) Brine (2) Slab & gran. carb.	29	HO	7	39,105

Lon. A/c £2  
Fee £6 : 0 : 0 { Fee applied for 8 - OCT 1940  
Travelling Expenses £ : : { Received by me, 5. 11. 1940

T.R. McIlvenna +  
Surveyor to Lloyd's Register.

Committee's Minute GLASGOW 8 - OCT 1940

Assigned - Lloyd's Rmc 10. 40

CERTIFICATE WRITTEN



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