

REPORT ON REFRIGERATING MACHINERY AND APPLIANCES.

(Received at London Office OCT 10 1938)

Date of writing Report 28th March 1938 When handed in at Local Office Port of **STETTIN**
No. in Reg. Book. 80430 Survey held at Berlin-Teget Date: First Survey 23rd July 37 Last Survey 15th Febr. 1938
(No. of Visits 13)

on the Refrigerating Machinery and Appliances of the MW Doordan Tons {Gross.....
Net.....
Vessel built at Rotterdam By whom built W. V. P. Smit jr. Yard No. 515 When built 1938
Owners _____ Port belonging to _____ Voyage _____
Refrigerating Machinery made by Rheinmetall-Borsig Machine No. 1429/46 When made 1938
Insulation fitted by _____ When fitted _____ System of refrigeration CO₂
Method of cooling Cargo Chambers _____ Insulating Material used _____
Number of Cargo Chambers insulated _____ Total refrigerated cargo capacity _____ 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 _____ Are all the units connected to all the refrigerated chambers yes
Compressors, driven direct ~~or through~~ ^{single} ~~double~~ } reduction gearing. Compressors, single or double acting double If multiple effect compression are relief valves or safety discs fitted yes No. of cylinders to each unit 2 Diameter of cylinders 65 mm.
Diameter of piston rod 35 mm. Length of stroke 110 mm. No. of revolutions per minute 340
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 3 Cast iron or steel casings Double pipe Cylindrical or rectangular ✓ Are safety valves fitted _____
to casings ✓ No. of coils in each ✓ Material of coils S. M. Steel Can each coil be readily shut off or disconnected yes

Water Circulating Pumps, No. and size of 1 rotary of 36 cbm/h how worked el. motor Gas Separators, No. of 3
1 with 3 compartments

Gas Evaporators, No. of 3 Cast iron or steel casings steel Pressure or gravity type Open If pressure type, are safety valves fitted ✓
No. of coils in each casing 3 Material of coils S. M. Steel Can each coil be readily shut off or disconnected yes

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 3 each of 1800/3000 cubic ft capacity, at 1400 revolutions per minute
Steam or electrically driven electrically 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 4 rotary, each 9 cbm/h how worked electrically
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 *yes, under* and Insulation *separate cover.*
 (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 compressors, condensers, evaporators, oil separators, strainers and intercoolers of this installation are made under Special Survey in accordance with the approved plans and the Secretary's letters. They have been tested as required and were found tight and sound, also in all parts of efficient workmanship.

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. Cubic ft.
3	3	CO ₂	Rheinmetall - Borsig, Ag.	1938.	Brine & air	Tons.	yes.		

Fee RM 160 - { Fee applied for, 26.2. 1938.
 Travelling Expenses # 1.15: { Received by me, 31.3 1938

M. Spolde
 Surveyor to Lloyd's Register.

Committee's Minute TUE 8 NOV 1938

Assigned See Rmc 68058

Certificate to be sent to



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