

REPORT ON MACHINERY.

Received at London Office

MON. 11 FEB. 1924

Date of writing Report 19 When handed in at Local Office 19 Port of Hong Kong
 No. in Survey held at Hong Kong Date, First Survey 18/9/22 Last Survey Dec. 1st. 19 23.
 Reg. Book. on the S. S. "YUEN SANG" (Number of Visits 75)
 Master Built at Hong Kong By whom built Hong Kong & Whampoa Dock Co. Tons { Gross 3229.29
 Net 1982.89
 Engines made at Hong Kong By whom made Hongkong & Whampoa Dock Co. Ld. when made 1923
 Boilers made at Hong Kong By whom made Hongkong & Whampoa Dock Co. Ld. when made 1923
 Registered Horse Power Owners Messrs The Indo-China S. N. Co. Port belonging to London
 Nom. Horse Power as per Section 28 414 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion Surface Condensing No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 23". 38". 63" Length of Stroke 45" Revs. per minute 90 Dia. of Screw shaft as per rule 13.46" Material of Ingot steel
 as fitted 13 1/2" screw shaft)
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liners, Vicker Is the after end of the liner made water tight
 in the propeller boss - If the liner is in more than one length are the joints burned - If the liner does not fit tightly at the part
 between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive - If two
 liners are fitted, is the shaft lapped or protected between the liners - Length of stern bush 5'0" (Michell)
 Dia. of Tunnel shaft as per rule 11.98" Dia. of Crank shaft journals as per rule 12.58" Dia. of Crank pin 13" Size of Crank webs 2'0 1/2" Dia. of thrust shaft under
 collars 13" Dia. of screw 15'0" Pitch of Screw 16'9" No. of Blades 4 State whether moveable fixed Total surface 72 #
 No. of Feed pumps 2 Diameter of ditto 3 1/2" Stroke 24" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 24" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 5 Sizes of Pumps 2 Weir feed Ballast Circ. PP 11" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 3 at 3" dia. (1.P, 1.S, 1.C) Fan Eng. 7x5 1/2" simplex In Holds, &c. (1-3" cofferdam 142-3) (2-3" fore hold)
 (2-3" main hold) (1-3" cofferdam 64-65) (2-3 1/2" deep tank) (2-3" aft. hold) (1-2 1/2" tunnel well) (1-3" cofferdam 34-35)
 No. of Bilge Injections 1 sizes 7" Connected to condenser, or to circulating pump Cir. pump Is a separate Donkey Suction fitted in Engine room & size 2 at 3 1/2"
 Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible -
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Discharge Pipes above or below the deep water line above
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes
 What pipes are carried through the bunkers None How are they protected -
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Upper Deck

OILERS, &c.—(Letter for record 7/9/23. Manufacturers of Steel The Steel Co. of Scotland 2SB
 Total Heating Surface of Boilers 6364 # Is Forced Draft fitted Yes No. and Description of Boilers 2. S.E. Multitubular
 Working Pressure 190 lbs. Tested by hydraulic pressure to 335 lbs. Date of test 5/10/23 No. of Certificate 143 & 144
 Can each boiler be worked separately Yes Area of fire grate in each boiler 66 # No. and Description of Safety Valves to
 each boiler 2. 4" dia. spring loaded Area of each valve 12.566 # Pressure to which they are adjusted 195 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers on uptakes and bunkers on woodwork 24" Mean dia. of boilers 15'9" Length 12'0" Material of shell plates steel
 Thickness 1.5/16 Range of tensile strength 29-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Double lap
 long. seams Treble butt Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 9 1/2" Lap of plates or width of butt straps 20 1/4"
 Per centages of strength of longitudinal joint rivets 88% Working pressure of shell by rules 191 lbs. Size of manhole in shell 16" x 12"
 plate 85.5%
 Size of compensating ring 3'2" x 2'10" No. and Description of Furnaces in each boiler 3 Morison Material steel Outside diameter 3'11 1/4"
 Length of plain part top 9 1/2" Thickness of plates crown 5/8" Description of longitudinal joint Welded No. of strengthening rings -
 bottom 9 1/2" 5/8"
 Working pressure of furnace by the rules 192 lbs Combustion chamber plates: Material steel Thickness: Sides 3/4" Back 11/16" Top 3/4" Bottom 3/4"
 Pitch of stays to ditto: Sides 9 1/2" x 8 1/2" Back 10 1/2" x 8 1/2" Top 8 1/2" x 9 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules
 S-83.7 # S-216 lbs
 Material of stays steel Area at smallest part 2.03 # Area supported by each stay 1-76.6 # Working pressure by rules B-211 # End plates in steam space:
 T-200 #
 Material steel Thickness 1.3/32 Pitch of stays 18 1/2" x 15" How are stays secured Nuts inside Working pressure by rules 195 lbs Material of stays steel
 Area at smallest part 5.411 # Area supported by each stay 283.6 # Working pressure by rules 210 lbs Material of Front plates at bottom steel
 Thickness 7/8" Material of Lower back plate steel Thickness 27/32 Greatest pitch of stays 13 1/2" x 8 1/2" Working pressure of plate by rules 230 lbs
 Diameter of tubes 2 1/2" Pitch of tubes 3 1/2" x 3 3/8" Material of tube plates steel Thickness: Front 7/8" Back 13/16" W 3/4" Mean pitch of stays 7 1/2" x 10 7/8"
 Pitch across wide water spaces 13 1/2" Working pressures by rules B wings 238 lbs. B centre 248 # Girders to Chamber tops: Material steel Depth and
 thickness of girder at centre 9 1/2" x 11/16" Length as per rule 34 1/2" Front 194 # Distance apart 9" Number and pitch of stays in each Three 1 1/2" x 10 7/8"
 Working pressure by rules 193 lbs Steam dome: description of joint to shell - % of strength of joint -
 Diameter - Thickness of shell plates - Material - Description of longitudinal joint - Diam. of rivet holes -
 Pitch of rivets - Working pressure of shell by rules - Crown plates - Thickness - How stayed -

SUPERHEATER. Type - Date of Approval of Plan - Tested by Hydraulic Pressure to -
 Date of Test - Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler -
 Diameter of Safety Valve - Pressure to which each is adjusted - Is Easing Gear fitted -

IS A DONKEY BOILER FITTED? **Yes, Cochran** If so, is a report now forwarded? **No**
 SPARE GEAR. State the articles supplied:— **See attached list.**

The foregoing is a correct description of the machinery of the vessel **HONGKONG & WHARF REFRIGERATION Co., Ltd.**

R. M. Dunn
 Chief Manager

Manufacturer.

Dates of Survey while building: During progress of work in shops - - 1922. Sept. 18, Nov. 14, 16, 28, Dec. 7, 16, 19, 28. 1923. Jan. 5, 8, 11, 15, Feb. 1, 5, 14, 22, Mar. 1, 5, 12, 16, 28, April. 3, 11, 16, 24, 30, May. 3, 10, 14, 15, 22, 26, 28, 29, June. 4, 8, 9, 11, 12, 18, 27, 30, July. 3, 10, 14, 26, Aug. 8, 15, 17, 21, 23, 28, Sept. 3, 5, 10, 11, 13, 19, 21, 25, 26, 28, Oct. 3, 5, 11, 18, 25, Nov. 2, 6, 14, 21, 26, 27, 29, Dec. 1.

Is the approved plan of main boiler forwarded herewith **No**
 " " " donkey " " " **No**

Dates of Examination of principal parts—Cylinders **18/6/23** Slides **28/8/23** Covers **17/8/23** Pistons **1/2/23** Rods **25/9/23**
 Connecting rods **28/8/23** Crank shaft **22/2/23** Thrust shaft **22/5/23** Tunnel shafts **17/8/23** Screw shaft **17/8/23** Propeller **17/8/23**
 Stern tube **13/9/23** Steam pipes tested **2/11/23** Engine and boiler seatings **26/9/23** Engines holding down bolts **25/10/23**
 Completion of pumping arrangements **26/11/23** Feed & blow tested **6/11/23** Boilers fixed **25/10/23** Engines tried under steam **26/11/23**
 Completion of fitting sea connections **26/9/23** Stern tube **26/9/23** Screw shaft and propeller **28/9/23**
 Main boiler safety valves adjusted **21/11/23** Thickness of adjusting washers P- **25/64 & 23/64"** S- **23/64 & 25/64"**
 Material of Crank shaft **steel** Identification Mark on Do. **Lloyd's No. 8612** Material of Thrust shaft **steel** Identification Mark on Do. **Lloyd's No. 8612**
 Material of Tunnel shafts **steel** Identification Marks on Do. **Lloyd's No. 8612** Material of Screw shafts **steel** Identification Marks on Do. **Lloyd's No. 8612**
 Material of Steam Pipes **Solid drawn copper** ✓ Test pressure **400 lbs.**
 " " Feed & blow off " " **No** ✓ **500 lbs.**
 Is an installation fitted for burning oil fuel **No** ✓ Is the flash point of the oil to be used over 150°F. **-**

Have the requirements of Section 49 of the Rules been complied with **-**
 Is this machinery duplicate of a previous case **Yes** ✓ If so, state name of vessel **S. S. "SUI SANG" Report No. 56**

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

The Materials have been tested by the Surveyors to this Society, and constructed as shown and amended on approved plans now in London Office.
 The Workmanship is good and it is recommended that the vessel be classed with Lloyds Machinery Certificate and the record of **M.C. 12, 1923** be made in the Register Book.

INDENTIFICATION MARKS ON MAIN BOILERS

No. 143 Hkg.
 Lloyds Test
 335 lbs.
 W.P. 190 lbs.
 T.S.M. 5.10.23

No. 144 Hkg.
 Lloyds Test
 335 lbs.
 W.P. 190 lbs.
 T.S.M. 5.10.23

Donkey Boiler with mountings complete, made by Cochran & Co. Amal. ✓
 Placed in recess in stokehold. ✓ Steam from Main Boilers cannot enter Donkey Boiler. ✓
 Safety valves adjusted to 100 lbs. Thickness of washers **7/16" x 15/64"**. ✓

INDENTIFICATION MARKS.

No. 16119
 Lloyds Test
 200 lbs.
 W. P. 100 lbs.
 26.9.22. J.D.

The amount of Entry Fee ... \$ 88.00. ✓ When applied for, **1/12/23**
 Special ... \$ 1534.00. ✓
 Donkey Boiler Fee ... \$ 50.00. ✓ When received, **1/12/23**
 Travelling Expenses (if any) \$ 166.00. ✓
 Electric Light \$ 247.00. ✓
 Committee's Minute **FRI. FEB 15 1924**

J. D. Morrison
 Engineer Surveyor to Lloyd's Register of Shipping

Assigned

L.M.C. 12.23

F. D. O. G.



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