

Rpt. 4.

REPORT ON MACHINERY.

No. 2519

Date of writing Report 16th June 1927 When handed in at Local Office 16th June 1927 Port of Shanghai
No. in Survey held at Shanghai Date, First Survey 5.2.26 Last Survey 2nd June 1927
Reg. Book. on the Steel Single Screw Steamer "Hsin Yangtze" (Number of Visits 44)
Master ✓ Built at Shanghai By whom built Shanghai Dock & Engin'g Co. Ltd When built 1927
Engines made at Shanghai By whom made Shanghai Dock & Engin'g Co. Ltd when made 1927
Boilers made at Shanghai By whom made Ditto when made 1927
Registered Horse Power 187 Owners Shanghai Pilot Boat Co. (1923) Ltd Port belonging to Shanghai
Nom. Horse Power as per Section 28 187 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Inverted direct acting surface condensing No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 18 1/2 - 29 - 49 Length of Stroke 33 Revs. per minute 100 Dia. of Screw shaft 10.35 Material of Mild steel
Is the screw shaft fitted with a continuous liner the whole length of the stern tube no liners ✓ Is the after end of the shaft made water tight
in the propeller boss yes 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 4'-0"
Dia. of Tunnel shaft as per rule 7.03 Dia. of Crank shaft journals as per rule 9.48 Dia. of Crank pin 9 5/8 Size of Crank webs 1 1/2 x 6 1/2 Dia. of thrust shaft under
collars 9 5/8 Dia. of screw 11-0 Pitch of Screw 14'-6" No. of Blades 4 State whether moveable no Total surface 484
No. of Feed pumps 2 Diameter of ditto 6-8 1/2 Stroke 18 Can one be overhauled while the other is at work yes
No. of Bilge pumps one Diameter of ditto 6 x 6 Stroke 6 Can one be overhauled while the other is at work —
No. of Donkey Engines 2 Sizes of Pumps (7 1/2 x 5 x 7) (7 x 7 x 8) No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room one 2 1/2" one 3" In Holds, &c. (Bunkers one 2 1/2") (tunnel well one 2 1/2")

No. of Bilge Injections one sizes 6" Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size one 3"
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 yes
Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks valves
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 Ballast, fresh water, & bilge How are they protected wood casings
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 Engine Room above L.W.L.
MILERS, &c.—(Letter for record) Manufacturers of Steel D. Colville & Sons Ltd; W. Beardmore & Co. - Ltd;

Total Heating Surface of Boilers 3404 Is Forced Draft fitted no No. and Description of Boilers 2 Scotch single ended.
Working Pressure 180 Tested by hydraulic pressure to 320 Date of test 28.10.26 No. of Certificates Nos. 34 & 35

Can each boiler be worked separately yes Area of fire grate in each boiler 55.5 No. and Description of Safety Valves to
each boiler two 2 3/4 (cock burns) Area of each valve 5.445 Pressure to which they are adjusted 187 lbs Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 5'-7 1/8" Mean dia. of boilers 13'-12" Length 10'-7 3/4" Material of shell plates Mild steel
Thickness 1 1/8" Range of tensile strength 28 to 32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams Double

g. seams treble Diameter of rivet holes in long. seams 1 3/16" Pitch of rivets 8" Lap of plates or width of butt straps 1'-6"
Percentages of strength of longitudinal joint 85.1 Working pressure of shell by rules 187.05 Size of manhole in shell 16" x 12"

Size of compensating ring 2'-10 1/2" x 2'-3" x 1 1/8" No. and Description of Furnaces in each boiler 3 Morrisons Corrugated Material M.S. Outside diameter 3'-1 3/2"
Length of plain part top 31/64" Thickness of plates bottom 31/64" Description of longitudinal joint Welded No. of strengthening rings 1

Working pressure of furnace by the rules 183 Combustion chamber plates: Material M.S. Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 5/8"
Pitch of stays to ditto: Sides 8 3/4 x 7 1/2 Back 8 1/2 x 7 1/4 Top 8 3/4 x 7 1/2 If stays are fitted with nuts or riveted heads nuts Working pressure by rules min. 203 lbs.

Material of stays M.S. Area at smallest part 1.73 Area supported by each stay 20.31 Working pressure by rules 182.6 End plates in steam space:
Material M.S. Thickness 1 1/8" Pitch of stays 1'-5 1/2" x 1'-6 1/2" How are stays secured nuts inside Working pressure by rules 181.449 Material of stays M.S.

Area at smallest part 6.10 Area supported by each stay 323.750 Working pressure by rules 207.6 Material of Front plates at bottom M.S.
Thickness 7/8" Material of Lower back plate M.S. Thickness 7/8" Greatest pitch of stays 13" x 7 3/4" Working pressure of plate by rules 273

Diameter of tubes 3" EXT. Pitch of tubes 4 1/4 x 4 1/8" Material of tube plates M.S. Thickness: Front 7/8" Back 3/4" Mean pitch of stays 8 3/8"
Pitch across wide water spaces 13 1/2 x 8 1/2" Working pressures by rules 185.3 lbs. Girders to Chamber tops: Material M.S. Depth and

Thickness of girder at centre 8 1/4 x (2) 5/8" Length as per rule 2'-4 5/8" Distance apart 8 3/4" Number and pitch of stays in each 30 8 3/4 x 7 1/2"
Working pressure by rules 191 lbs. Steam dome: description of joint to shell ✓ % of strength of joint ✓

Material ✓ Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ Diam. of rivet holes ✓
No. 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 ✓
No. 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 ✓

120-0218

REPO

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— One pair of crank pin brasses, one pair of crosshead brasses, two ecc. straps, one valve spindle, one piston rod, two main bearing bolts & nuts, two top end bolts & nuts, two bottom end bolts & nuts, one set bilge pump valves & seats, one set feed pump valves & seats, fifty brass ferrules for cond. tubes, two main check & two dry check valves, 24 plain boiler tubes, six cyl. cover studs & nuts, fifty cond. tubes, one cyl. escape valve spring for each size, one set of safety valve springs main boilers, one set of fire bars for two furnaces, one spare impeller and shaft for circulating pump.

1 Set Coupling bolts. See Encls. ltr 1/8/27

9 Coupling bolts

The foregoing is a correct description,

THE SHANGHAI DOCK & ENGINEERING CO., LTD.
W. S. Burns

Manufacturer.

Dates of Survey while building: During progress of work in shops -- 5.2.26; 23.2.26; 6.3.26; 10.3.26; 11.3.26; 15.3.26; 23.3.26; 8.4.26; 15.4.26; 20.4.26; 26.4.26; 11.5.26; 18.5.26; 26.5.26; 5.6.26; 16.6.26; 25.6.26; 5.7.26; 6.7.26; 9.7.26; 12.7.26; 21.7.26; 26.7.26; 29.7.26; 6.8.26; 12.8.26; 18.8.26; 28.8.26; 2.9.26; 9.9.26; 18.9.26; 28.9.26; 30.9.26; 7.10.26; 19.10.26; 21.10.26; 27.10.26; 28.10.26; 1.11.26; 4.11.26; 9.11.26; 16.11.26; 17.11.26; 22.11.26; 28.11.26; 25.11.26; 4.12.26; 8.12.26; 9.12.26; 15.12.26; 20.12.26; 22.12.26; 28.12.26; 29.12.26; 4.1.27; 20.1.27; 24.1.27; 31.1.27; 9.2.27; 21.4.27. 28.5.27; 31.5.27; 2.6.27. Is the approved plan of main boiler forwarded herewith *Yes*.

Dates of Examination of principal parts—Cylinders 18.8.26 Slides 18.9.26 Covers 18.8.26 Pistons 4.11.26 Rods 4.11.26

Connecting rods 11.5.26 Crank shaft 25.6.26 Thrust shaft 9.9.26 Tunnel shafts 30.9.26 Screw shaft 8.12.26 Propeller 9.12.26

Stern tube 16.11.26 Steam pipes tested 24.1.27 Engine and boiler seatings 4.11.26 Engines holding down bolts 20.1.27

Completion of pumping arrangements 9.3.27 Boilers fixed 29.12.26 Engines tried under steam

Completion of fitting sea connections 20.12.26 Stern tube 25.11.26 Screw shaft and propeller 20.12.26

Main boiler safety valves adjusted to 187 lbs. Thickness of adjusting washers SB, SV $\frac{5}{16}$ ", PV $\frac{3}{8}$ ", PB, SV $\frac{5}{16}$ ", PV $\frac{5}{8}$ "

Material of Crank shaft Steel Identification Mark on Do SHI, NO 21 Material of Thrust shaft Steel Identification Mark on Do SHI, NO 22

Material of Tunnel shaft Steel Identification Marks on Do SHI, NO 23 Material of Screw shafts Steel Identification Marks on Do SHI, NO 24

Material of Steam Pipes Copper Test pressure 360 per sq. in.

Is an installation fitted for burning oil fuel *No* Is the flash point of the oil to be used over 150°F. *Yes*

Have the requirements of Section 49 of the Rules been complied with *Yes*

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. The screw shaft is fitted with "Vickers

outside gland.

A No. 7 "Halls" refrigerating machine is fitted for ship's domestic purposes.

The machinery of this vessel has been built under Special Survey in accordance

with the approved plans and the Rules. The materials and workmanship

are good. The main and auxiliary engines and the boilers have been

well tried under working conditions and found satisfactory.

In my opinion the machinery of this vessel is eligible for the record

● L.M.C. 6.27 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 6.27. OG.

27/7/27

H. L. Fletcher & M. Boyle

Engineer Surveyor to Lloyd's Register of Shipping

When applied for, 9.4.1927

When received, 20.6.1927

The amount of Entry Fee ... \$48.00

Special ... \$816.00

Donkey Boiler Fee ... £

Travelling Expenses (if any) \$62.00

Committee's Minute 29 JUL 1927

Assigned + L.M.C. 6.27 OG.

CERTIFICATE WRITTEN

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