

REPORT ON MACHINERY.

Port of Shanghai

SAT. JUL. 25. 1914

Received at London Office

No. in Survey held at Shanghai

Date, first Survey 9.12.13

Last Survey 27.6.1914

g. Book.

(Number of Visits 26)

on the Steel Screw Towboat "Kailan"

Tons { Gross 228.99
Net 96.78

Built at Shanghai By whom built Kiangnan Dk & Eng Works When built 1914

Engines made at Shanghai By whom made Kiangnan Dk & Eng Works when made 1914

Boilers made at Glasgow By whom made Lindsay Burnett & Co when made 1914

Registered Horse Power

Owners Kailan Shipping Administration Port belonging to Shanghai

Indicated Horse Power as per Section 28 63.

Is Refrigerating Machinery fitted No

Is Electric Light fitted Yes

GINES, &c. Description of Engines Compound Surface Condensing No. of Cylinders 2 No. of Cranks 2
No. of Cylinders 14" x 28" Length of Stroke 18" Revs. per minute 184 Dia. of Screw shaft 6 1/2" Lgth. of stern bush 2' 8"
Dia. of Tunnel shaft 5 1/4" Dia. of Crank shaft journals 6 1/2" Dia. of Crank pin 6" Size of Crank webs 3 1/2 x 12" Dia. of thrust shaft under
No. of blades 4 State whether moveable No Total surface 21 sq. ft
Dia. of screw 6' 10" Pitch of screw 7' 6" No. of blades 4 State whether moveable No
of Feed pumps 1 Diameter of ditto 2 1/4" Stroke 9" Can one be overhauled while the other is at work
of Bilge pumps 1 Diameter of ditto 2 1/4" Stroke 9" Can one be overhauled while the other is at work
of Donkey Engines Two Sizes of Pumps Two 5' x 3' x 5 1/2" No. and size of Suctions connected to both Bilge and Donkey pumps
Engine Room Two 2" In Holds, &c. 2"

of bilge injections 1 sizes 3" Connected to circulating pump Is a separate donkey suction fitted in Engine room & size Yes 2"
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 None
all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both
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
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
at pipes are carried through the bunkers None How are they protected
all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times Yes
the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges Yes
in were stern tube, propeller, screw shaft, and all connections examined in dry dock 3.6.14 Is the screw shaft tunnel watertight None

GINES, &c. — Glasgow No 125-96 worked from
(Letter for record S) Total Heating Surface of Boilers 1500 sq. ft Is forced draft fitted No
and Description of Boilers One Return tubular Working Pressure 130 lbs Tested by hydraulic pressure to 260 lbs
of test 11.3.14 Can each boiler be worked separately Area of fire grate in each boiler 46 sq. ft No. and Description of safety valves to
boiler Two spring loaded Area of each valve 8.29 sq. ft Pressure to which they are adjusted 135 lbs Are they fitted with easing gear Yes
Least distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 12' 0" Length 16' 6" Material of shell plates
Range of tensile strength Are they welded or flanged Descrip. of riveting: cir. seams long. seams
Pitch of rivets Lap of plates or width of butt straps
Percentages of strength of longitudinal joint Working pressure of shell by rules Size of manhole in shell
of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter
Thickness of plates Description of longitudinal joint No. of strengthening rings
Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom
of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules
Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space:
Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays
Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom
Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules
Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays
Girders to Chamber tops: Material Depth and
Length as per rule Distance apart Number and pitch of Stays in each
Working pressure by rules Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked
Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet
Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
fitted with rings Distance between rings Working pressure by rules End plates: Thickness How stayed
Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

DONKEY BOILER— No. Description *None*

Made at By whom made When made Where fixed
Working pressure tested by hydraulic pressure to No. of Certificate Fire grate area Description of safety valves
No. of safety valves Area of each Pressure to which they are adjusted If fitted with easing gear If steam from main boiler
enter the donkey boiler Dia. of donkey boiler Length Material of shell plates Thickness Range of strength
Descrip. of riveting long. seams Dia. of rivet holes Whether punched or drilled Pitch of rivets
Lap of plating Per centage of strength of joint Rivets Thickness of shell crown plates Radius of do. No. of Stays to do.
Dia. of stays. Diameter of furnace Top Bottom Length of furnace Thickness of furnace plates Descrip.
joint Thickness of furnace crown plates Stayed by Working pressure of shell by rules
Working pressure of furnace by rules Diameter of uptake Thickness of uptake plates Thickness of water tubes

SPARE GEAR. State the articles supplied:— One pair crank pin bushes with bolts & nuts. One pair cracked bushes with bolts & nuts. One set coupling bolts, two main bearing bolts. Set of HP & LP piston rings, one eccentric strap. One valve spindle, one set feed & bilge pump valves. One spare tail shaft. Two spare propellers. Check valves. 25 condenser tubes & 50 ferrules. 12 boiler tubes. 1/2 set fire bars. A quantity of assorted bolts & nuts & iron of various sizes.
The foregoing is a correct description,

R. B. Marchant Manufacturer.

Dates During progress of work in shops— 1913. Dec 9. 15. 30. 1914. Jan 10. 21. Feb 12. 24. 27. March 4. 14. 17. 25. April 1. 14. 29. May 1. 25. 29. June 3. 8. 10. 15. 20. 22. 27.
of Survey while building During erection on board vessel —
Total No. of visits 26
Is the approved plan of main boiler forwarded herewith

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery of this vessel has been built under special survey in accordance with the Rules, the material & workmanship is good and the machinery has been tried satisfactorily under steam. In my opinion the vessel is eligible for the record LMC 6-14

Material of screw shaft Steel Is the screw shaft fitted with a continuous liner the whole length of the stern tube Two liners
Is the after end of the liner 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 non-corrosive
If two liners are fitted, is the shaft lapped or protected between the liners Lapped with canvas

It is submitted that this vessel is eligible for THE RECORD. + LMC. 6.14.

The amount of Entry Fee... £12 : : When applied for, 26.6.1914
Special... £185 : :
Donkey boiler Fee... £ : : When received, 29.6.1914
Travelling Expenses (if any) £20 : :
WED. AUG. -5. 1914

Committee's Minute

Assigned

Engineer Surveyor to Lloyd's Register of British & Foreign Ships

Lloyd's Register Foundation