

Rpt. 4.

REPORT ON MACHINERY.

No. 2295

Received at London Office TUE. 13 NOV. 1917

Date of writing Report 4th Octr. 17 When handed in at Local Office 10 Port of YOKOHAMA
No. in Survey held at URAGA Date, First Survey 6th April Last Survey 30th Sept 1917.
Reg. Book. (Number of Visits 26)
on the steel screw Steamer KOFUKU MARU Tons { Gross 4736.52
Master Built at URAGA By whom built URAGA DOCK CO. When built 1917.
Engines made at URAGA By whom made URAGA DOCK CO. when made 1917
Boilers made at URAGA By whom made URAGA DOCK CO. when made 1917

Registered Horse Power 2500 Owners Hiroumi Nisaburo K.K. Port belonging to Uruga
Nom. Horse Power as per Section 28 378 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 24 $\frac{1}{2}$ "-40 $\frac{1}{2}$ "-67" Length of Stroke 48" Revs. per minute 78.2 Dia. of Screw shaft as per rule 13.9 as fitted 14. Material of screw shaft Steel
Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight
Is the propeller boss Yes If the liner is in more than one length are the joints burned Yes 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 Yes If two
liners are fitted, is the shaft lapped or protected between the liners XXXX Length of stern bush 61"
Dia. of Tunnel shaft as per rule 12.5" as fitted 12 $\frac{3}{4}$ " Dia. of Crank shaft journals as per rule 13.12" as fitted 13 $\frac{1}{4}$ " Dia. of Crank pin 13 $\frac{1}{4}$ " Size of Crank webs 28X8 $\frac{1}{2}$ " Dia. of thrust shaft under
collars 13 $\frac{1}{4}$ " Dia. of screw 16ft 9" Pitch of Screw 18 ft No. of Blades 4 State whether moveable Yes Total surface 32.2 sq. ft.
No. of Feed pumps 2 Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work Yes
No. of Donkey Engines 4 Sizes of Pumps 2 Yamamoto pumps 9 $\frac{1}{2}$ " & 7" X 21" stroke No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 3 each 3 $\frac{1}{2}$ " 1. Ballast Pump 8 $\frac{1}{2}$ " & 10 $\frac{1}{2}$ " X 16" stroke In Holds, &c. No. 1 Hold 2 each 2 $\frac{1}{2}$ ", No. 2 Hold 2 each 2 $\frac{1}{2}$ "
No. 3 Hold One-3 $\frac{1}{2}$ ", No. 4 Hold One-3 $\frac{1}{2}$ ".
No. of Bilge Injections 1 sizes 7" Connected to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 3 $\frac{1}{2}$ "
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 None
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 XXX
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 Top Platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Carnegie Steel Co Pittsburgh U.S.A.
Total Heating Surface of Boilers 6382 sq. ft. Forced Draft fitted NO No. and Description of Boilers 3 Scotch Multitubular.
Working Pressure 180 Lbs Tested by hydraulic pressure to 360 Lbs Date of test 4-8-17. No. of Certificate U. 135
Can each boiler be worked separately Yes Area of fire grate in each boiler 60 sq. ft. No. and Description of Safety Valves to
each boiler 2 Spring loaded Area of each valve 8.29 sq. in. Pressure to which they are adjusted 185 Lbs. Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers or woodwork 12 $\frac{1}{2}$ " Mean dia. of boilers 13ft 9" Length 10ft 9" Material of shell plates S
Thickness 1 $\frac{3}{16}$ " Range of tensile strength 28-32 Are the shell plates welded or flanged Yes Descrip. of riveting: cir. seams Double R.
long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 $\frac{1}{4}$ " Pitch of rivets 8 $\frac{1}{2}$ " Lap of plates or width of butt straps 18 $\frac{1}{2}$ "
Per centages of strength of longitudinal joint rivets 88.9 plate 85.7 Working pressure of shell by rules 194 Size of manhole in shell 16" X 12".
Size of compensating ring 33" X 29" No. and Description of Furnaces in each boiler 3 Morrison Material S Outside diameter 44 $\frac{1}{2}$ "
Length of plain part top XX bottom XX Thickness of plates crown 9/16" Description of longitudinal joint weld No. of strengthening rings None
Working pressure of furnace by the rules 198 Combustion chamber plates: Material S Thickness: Sides 5" Back 5" Top 5" Bottom 7"
Pitch of stays to ditto: Sides 9X7 $\frac{3}{4}$ " Back 8 $\frac{1}{2}$ " X 7 $\frac{3}{4}$ " Top 8 $\frac{3}{4}$ " X 8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 192 Lbs
Material of stays S Area at smallest part 1.79" Area supported by each stay 67.8" Working pressure by rules 192 End plates in steam space:
Material S Thickness 1" Pitch of stays 16 $\frac{1}{2}$ " X 14 $\frac{1}{2}$ " How are stays secured D. Nuts Working pressure by rules 190 Material of stays S
Area at smallest part 4.37" Area supported by each stay 2338 sq. in. Working pressure by rules 190 Material of Front plates at bottom S
Thickness 15/16" Material of Lower back plate S Thickness 1" Greatest pitch of stays 18.5 X 7" Working pressure of plate by rules 272
Diameter of tubes 3 $\frac{1}{4}$ " Pitch of tubes 4 $\frac{1}{2}$ " Material of tube plates S Thickness: Front 15/16" Back 3" Mean pitch of stays 8 $\frac{3}{4}$ "
Pitch across wide water spaces 13 $\frac{1}{2}$ " Working pressures by rules 197 Lbs Girders to Chamber tops: Material S Depth and
thickness of girder at centre 7 $\frac{1}{2}$ " X 1 $\frac{1}{2}$ " Length as per rule 25 $\frac{1}{2}$ " Distance apart 8" Number and pitch of stays in each 2. 8 $\frac{3}{4}$ "
Working pressure by rules XX Steam dome: description of joint to shell XX % of strength of joint XX
Diameter XX Thickness of shell plates XXX Material XXX Description of longitudinal joint XXX Diam. of rivet holes XXX
Pitch of rivets XXX Working pressure of shell by rules XXXX Crown plates XXX Thickness XXX How stayed XXX
SUPERHEATER. Type XXX Date of Approval of Plan XXX Tested by Hydraulic Pressure to XX
Date of Test XXX Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler XX
Diameter of Safety Valve XX Pressure to which each is adjusted XX Is Easing Gear fitted XX

IS A DONKEY BOILER FITTED?

NO

If so, is a report now forwarded?

XX

SPARE GEAR. State the articles supplied:— 2 Connecting Rod Bottom end bolts, 4 Top End bolts, 1 Set of Shaft Coupling Bolts, 1 Set Main Bearing Bolts, 1 Set Feed and Bilge Pump valves, 1 Set Piston rings 2 Eccentric Rods, 2 Sets Top End Brasses, One Circulating Pump Impeller and bronze shaft for same One Air Pump Rod. A Quantity of bolts and nuts assorted.

The foregoing is a correct description,

Y. K. Kamura

Manufacturer.

Dates of Survey while building { During progress of work in shops -- April 6th, May 3rd, 11th, 12th, 21st, 24th, June 6th, 9th, 13th, 29th, July 7th, 11th, 13th, 21st, 23rd, Augt 4th, 13th, 25th, 29th, Sept. 6th, 17th, 20th, 22nd, 26th, 29th, 30th. During erection on board vessel --- Total No. of visits 26.

Is the approved plan of main boiler forwarded herewith NO

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 11-13 July Slides 7th July Covers 11-13 July Pistons 7th July Rods 4th July Connecting rods 4th July Crank shaft 23rd July Thrust shaft 8th Aug Tunnel shafts 30 Augt Screw shaft 30 Augt Propeller 29th Aug Stern tube 21 July Steam pipes tested 22 Sept Engine and boiler seatings 15 Sept Engines holding down bolts 15 Sept Completion of pumping arrangements 26th Sept Boilers fixed 6th Sept Engines tried under steam 29th Sept Completion of fitting sea connections 29th Augt Stern tube 31st Augt port screw shaft and propeller 20th Sept Main boiler safety valves adjusted 26th Sept Thickness of adjusting washers 1 1/4" & 1" : 1 1/8" & 1 1/2" : 1" & 3/4" Material of Crank shaft S Identification Mark on Do. U.135 Material of Thrust shaft S Identification Mark on Do. U.135 Material of Tunnel shafts S Identification Marks on Do. U.135 Material of Screw shafts S Identification Marks on Do. U.135 Material of Steam Pipes Steel and copper Test pressure 540 Lbs and 360 Lbs. Is an installation fitted for burning oil fuel NO Is the flash point of the oil to be used over 150°F. NO 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 Shinsei, Shingo, Yoshida Maru No2.

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 Approved Plans and the Rules. The Materials and

Workmanship are Good, the Vessel being eligible in my opinion for Record + L.M.C. 9.17 see Cert

It is submitted that this vessel is eligible for THE RECORD + LMC 9.17.

The amount of Entry Fee ... £ 30.00 When applied for, Special ... £ 584.00 5-10-1917 Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) £ See Bill : 9-10-1917

Committee's Minute FRI. 16 NOV. 1917

Assigned

Engineer Surveyor to Lloyd's Register of Shipping.



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