Rpt. 4.

REPORT ON MACHINERY.

No. 2259

Received at London Office WED 14 1918

Date of writing Report 17th June 1918 When handed in at Local Office ~ 19 Port of Kobe

No. in Reg. Book. Survey held at Kobe Date, First Survey 10th July 1917 Last Survey 4th May 1918 (Number of Visits 38)

on the Steel Single Screw Steamer "Taifuku Maru, No 20" Tons Gross / Net

Master Built at Kobe By whom built The Kawasaki Dkyd Co Ltd When built 1918

Engines made at Kobe By whom made The Kawasaki Dkyd. Co Ltd when made 1918

Boilers made at do By whom made do when made do

Registered Horse Power Owners The United States Shipping Board Port belonging to

Nom. Horse Power as per Section 28 444 ✓ Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion ✓ No. of Cylinders Three ✓ No. of Cranks Three ✓

Dia. of Cylinders 26" : 43½" : 72" ✓ Length of Stroke 48" ✓ Revs. per minute 70 ✓ Dia. of Screw shaft as per rule 15.4 15.58 as fitted 16.0 ✓ Material of screw shaft) Steel ✓

Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liner ✓ 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'-5¼" ✓

Dia. of Tunnel shaft as per rule 13.48 13.54 as fitted 13¾ ✓ Dia. of Crank shaft journals as per rule 14.15 14.21 as fitted 14⅜ ✓ Dia. of Crank pin 14¾ ✓ Size of Crank webs 9½ × 20⅛ ✓ Dia. of thrust shaft under collars 14⅜ ✓ Dia. of screw 17'-6" ✓ Pitch of Screw 19'-0" mean ✓ No. of Blades 4 ✓ State whether moveable Yes ✓ Total surface 26⅔ 100 Sq.ft. ✓

No. of Feed pumps One ✓ Diameter of ditto 5" ✓ Stroke 24" ✓ Can one be overhauled while the other is at work ∇ Weirs feed ✓

No. of Bilge pumps Two ✓ Diameter of ditto 5" ✓ Stroke 24" ✓ Can one be overhauled while the other is at work Yes ✓

No. of Donkey Engines Three ✓ Sizes of Pumps Bal. 10"·11"·12" dup. ✓ Weirs feed 9½·7·24 two ✓ No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Three 3½" ✓ Gen. Service 7½·5·6 dup. ✓ In Holds, &c. Nos. 1, 3 & 4 holds each two 3½" ✓ No. 2 hold, two 4" ✓

No. of Bilge Injections 1 ✓ sizes 10" ✓ Connected to condenser, or to circulating pump Cir.p. ✓ Is a separate Donkey Suction fitted in Engine room & size Yes 3½ ✓

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 Larger, Valves: Smaller, Cocks. ✓

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 grating of E. Rm. ✓

BOILERS, &c.—(Letter for record S ✓) Manufacturers of Steel John Spencer & Sns. Alan Wood. Illinois. Carnegie. ✓

Total Heating Surface of Boilers 5809 □' ✓ Is Forced Draft fitted Yes ✓ No. and Description of Boilers Two Single Ended ✓

Working Pressure 200 lbs ✓ Tested by hydraulic pressure to 400 lbs ✓ Date of test 22nd & 29 Mar: 1918 No. of Certificate LLOYDS TEST 400 LBS. HYD 22/3/18: 29/3/18 ALJR

Can each boiler be worked separately Yes ✓ Area of fire grate in each boiler 63¼ □' ✓ No. and Description of Safety Valves to each boiler Two Spring loaded ✓ Area of each valve 11.04 □" Pressure to which they are adjusted 205 lbs ✓ Are they fitted with easing gear Yes ✓

Smallest distance between boilers or uptakes and bunkers or woodwork 18" ✓ Mean dia. of boilers 16'-0" ✓ Length 12'-0" ✓ Material of shell plates Steel ✓

Thickness 1 15/32" ✓ Range of tensile strength 28 to 32 tons ✓ Are the shell plates welded or flanged No. ✓ Descrip. of riveting: cir. seams Double ✓ long. seams Doub. Straps treble riveted ✓ Diameter of rivet holes in long. seams 1 9/16" ✓ Pitch of rivets 10" & 5" Rivets per pitch ✓ Thickness of plates or width of butt straps 21¾ × 1⅜ ✓

Per centages of strength of longitudinal joint rivets 97.0 ✓ plate 84.37 ✓ Working pressure of shell by rules 207 lbs ✓ Size of manhole in ~~shell~~ END 16" × 12" in End pl. ✓

Size of compensating ring End plate flanged ✓ No. and Description of Furnaces in each boiler 3 Morison's Susp. ✓ Material Steel ✓ Outside diameter 50¼" ✓

Length of plain part top ~ bottom ~ ✓ Thickness of plates crown 11/16" ✓ bottom 11/16" ✓ Description of longitudinal joint Weld ✓ No. of strengthening rings ~

Working pressure of furnace by the rules 224 lbs ✓ Combustion chamber plates: Material Steel ✓ Thickness: Sides 11/16" ✓ Back 11/16" ✓ Top 11/16" ✓ Bottom 7/8" ✓

Pitch of stays to ditto: Sides 7¾" × 9 3/4" ✓ Back 8" × 9½" ✓ Top 8⅜" × 9 3/16" ✓ If stays are fitted with nuts or riveted heads Nuts ✓ Working pressure by rules 200 lbs ✓

Material of stays Steel ✓ Area at smallest part to 8 3/8 × " 2.1 □" mid. 2.43 □" Margin 3.17 □" Corner ✓ Area supported by each stay 8¼ × 9¾ ✓ Working pressure by rules 230 lbs ✓ End plates in steam space:

Material Steel ✓ Thickness 1 3/16" ✓ Pitch of stays 19¼ × 16 3/4" ✓ How are stays secured Doub. nuts 7 × 5/8 washers ✓ Working pressure by rules 205 lbs ✓ Material of stays Steel ✓

Area at smallest part 7.5 □" ✓ Area supported by each stay 19¼ × 16¾" ✓ Working pressure by rules 240 lbs ✓ Material of Front plates at bottom Steel ✓

Thickness 13/16" ✓ Material of Lower back plate Steel ✓ Thickness 3/4" ✓ Greatest pitch of stays 13½ (betw. c.c.) doubled 5/8 ✓ Working pressure of plate by rules 200 lbs ✓

Diameter of tubes 3¼" ✓ Pitch of tubes 4½ × 4 5/16" ✓ Material of tube plates Steel ✓ Thickness: Front 13/16" ✓ Back 13/16" ✓ Mean pitch of stays 10" ✓

Pitch across wide water spaces 13¾, Doub 3/8 ✓ Working pressures by rules 200 lbs ✓ Girders to Chamber tops: Material Steel ✓ Depth and thickness of girder at centre 10¾ × 13/16 (less) ✓ Length as per rule 35¼" ✓ Distance apart 9 3/16" ✓ Number and pitch of stays in each Three @ 8⅜ ✓

Working pressure by rules 230 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 Schmidt ✓ Date of Approval of Plan Tested by Hydraulic Pressure to 600 lbs ✓

Date of Test 27 March. 1918 ✓ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes ✓

Diameter of Safety Valve 3" ✓ Pressure to which each is adjusted 205 lbs ✓ Is Easing Gear fitted No. ✓

If not, state whether, and when, one will be sent?

Is a Report also sent on the Hull of the Ship?

Yes

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007363-007375-0210

IS A DONKEY BOILER FITTED? No. ✓ If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Four main bearing bolts & nuts. ✓
Two crank pin do do ✓
Two Crosshead do do ✓
Set Coupling do do ✓
Set fed & bilge pump valves ✓
Assorted bolts & nuts & iron. ✓
Set packing rings & springs each piston
Set junk ring bolts & nuts.
One part crank shaft. Propeller shaft.
Four blades & two sets studs & nuts.
Slid valve spindle each size.
Centrifugal impellet & shaft.
Crosshead & crank pin brasses.
A.P. rod & nut. Three safety valve springs.
Condenser tubes. Boiler tubes etc. etc.

The foregoing is a correct description,

J. Aitkane
KAWASAKI DOCKYARD COMPANY, LTD
Manufacturer.

Dates of Survey while building — During progress of work in shops: 10th July 13th 31 July. 10th 13 Aug. 3rd Sept. 7th 10 Sept. 25 Oct. 3rd 7th 15th 21st Nov. 3rd 7th Dec 1917. 17. 29 Jany. 4th 9th 12 Feby. 7th 14. 18. 21st 22nd 27th Mar. {4th 9th 10. 12. 13. 19. 20. 25. 26 Apl
During erection on board vessel: 1st 2nd 4 May 1918
Total No. of visits 38

Is the approved plan of main boiler forwarded herewith Yes
" " " donkey " " " None

Dates of Examination of principal parts—Cylinders 3/9/17 etc Slides 7th Nov 17 Covers 7th Nov 17 Pistons 7th Dec 17 Rods 13/8/17 etc
Connecting rods 13/8/17 Crank shaft 25/10/17 etc Thrust shaft 25/10/17 Tunnel shafts 3/11/17 Screw shaft 21/3/18 Propeller 7/12/17 etc
Stern tube 14/3/18 Steam pipes tested 12/4/18 19/4/18 Engine and boiler seatings 4/4/18 Engines holding down bolts 13/4/18
Completion of pumping arrangements 1st May 1918 Boilers fixed 20th April 1918 Engines tried under steam 1st May 1918
Completion of fitting sea connections 9th April 1918 Stern tube 4th April 1918 Screw shaft and propeller 9th April 1918
Main boiler safety valves adjusted 26th April 1918 Thickness of adjusting washers Star blr. Fore 15/16 Aft 7/8 : Port blr Fore 5/8 Aft 9/16
Material of Crank shaft Steel Identification Mark on Do. {LLOYDS 25.10.17 A.L.J. R} Material of Thrust shaft Steel Identification Mark on Do. {LLOYDS 25.10.17 A.L.J. R}
Material of Tunnel shafts Steel Identification Marks on Do. LLOYDS 3.11.17 ALJ R Material of Screw shafts Steel Identification Marks on Do. LLOYDS 21.3.18
Material of Steam Pipes Steel Test pressure 600 lbs Spare LLOYDS 25.4.18 ALJ R
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 "Tofuku Maru" "Seifuku Maru" etc

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

This machinery has been built & fitted under Special Survey in accordance with the Rules & the materials & workmanship have been found good.

On trial a mean speed of 14·3 Knots was attained. Revs. per min 79½. Vac. 29"
I.H.P. 935 (4 c.) + 1394 (3 c.) + 1489 (2 c.) = 3818 (Impulse Valves open). Draught of vessel. Fwd 8'-5" Aft 15'-8" Mean 12'-0½"
Consumpt. at rate 1·21 lbs per I.H.P. per hr. 45·2 tns per day.

The vessel is in my opinion eligible for the notation + LMC 5.18

It is submitted that this vessel is eligible for THE RECORD + LMC 5.18.F.D.
16/8/18.

The amount of Entry Fee ... Yen : 30 :
Special ... ... Yen 633 :
Donkey Boiler Fee ... : :
Travelling Expenses (if any) Yen : 15 :
When applied for, 10 May 1918
When received, 15 May 1918

Arthur L. Jones
Engineer Surveyor to Lloyd's Register of Shipping.

TUE. 20 AUG. 1918

Committee's Minute.

Assigned + LMC 5.18

Surveyor's Signature Arthur L. Jones

Certificate (if required) to be sent to

The Surveyors are requested not to write on or below the space for Committee's Minute.)

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