

REPORT ON MACHINERY

No. 1720

WED. 26 JAN. 1916

Received at London Office

Date of writing Report 13 Dec 1915 when made at Kobe

No. in Survey held at Kobe Date, First Survey 17 May Last Survey 3rd Dec 1915

Reg. Book. on the Steamer "No 10 Daiun Maru" (Number of Visits 30)

Master Y. Miyake Built at Kobe By whom built The Kawasaki Dockyard Co. Ltd. Tons Gross 1676 Net 997

Engines made at Kobe By whom made The Kawasaki Dockyard Co. Ltd. when made 1915

Boilers made at Kobe By whom made do when made do

Registered Horse Power Owners T Hayashi Port belonging to Nishinomiyama

Vom. Horse Power as per Section 28 172 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3

No. of Cylinders 17 1/2 : 28 : 46 Length of Stroke 36 Revs. per minute 65 Dia. of Screw shaft as per rule 11.08 as fitted 11.5/8 Material of screw shaft Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube No Is the after end of the liner made water tight

Is 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 No liner Length of stern bush 3' 11 1/4"

Dia. of Tunnel shaft as per rule 9.05 as fitted 9.3/8 Dia. of Crank shaft journals as per rule 9 1/2 as fitted 9 5/8 Dia. of Crank pin 9 3/4 Size of Crank webs 6 x 16 Dia. of thrust shaft under collars 9 5/8 Dia. of screw 13.6 Pitch of Screw 17 1/2 No. of Blades 4 State whether moveable No Total surface 780"

No. of Feed pumps 2 Diameter of ditto 3 1/4 Stroke 18 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 3 1/4 Stroke 18 Can one be overhauled while the other is at work Yes

No. of Donkey Engines Two Sizes of Pumps Bal. 4 x 8 x 10 dup. No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room Cen 2 1/2" Wings 2 1/4" Tunnel well 2 1/4" In Holds, &c. Two 2 1/4" to each hold (Nos 1, 2 for No 3 aft)

No. of Bilge Injections 1 sizes 4 1/2 Connected to condenser, or to circulating pump As per Is a separate Donkey Suction fitted in Engine room & size Yes 2 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 Now

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

Dates of examination of completion of fitting of Sea Connections 23rd Sep. 1915 of Stern Tube 18th Sep. 1915 Screw shaft and Propeller 23rd Sep. 1915

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Upper platform 8 R

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel Beardmore & Co.

Total Heating Surface of Boilers 3135 Is Forced Draft fitted No No. and Description of Boilers Two Single Ended

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 13/9/15 18/9/15 No. of Certificate Dated 13/9/15 18/9/15

Can each boiler be worked separately Yes Area of fire grate in each boiler 49.5 No. and Description of Safety Valves to each boiler Two direct spring Area of each valve 3 1/4" dia. 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" Mean dia. of boilers 12.0 Length 10.0 Material of shell plates Steel

Thickness 1" Range of tensile strength 29-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Double riv. long. seams Double straps Diameter of rivet holes in long. seams 1 1/16 Pitch of rivets 6 7/8 x 3 7/16 Lap of plates or width of butt straps 14 1/2 x 1"

Per centages of strength of longitudinal joint rivets 95.8 plate 84.37 Working pressure of shell by rules 180 lbs Size of manhole in shell 12" x 16"

Size of compensating ring 2' 4 3/4" x 2' 8 3/4" No. and Description of Furnaces in each boiler 2 plain Material Steel Outside diameter 2' 10 1/4"

Length of plain part top 32 1/2 Flanged Thickness of plates crown 5/8 Description of longitudinal joint Weld No. of strengthening rings One

Working pressure of furnace by the rules 203 Combustion chamber plates: Material Steel Thickness: Sides 9/16 Back 9/16 Top 19/32 Bottom 11/16

Pitch of stays to ditto: Sides 7 1/2 x 7 1/2 Back 7 1/2 x 7 1/2 Top 7 1/2 x 8 1/2 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 180 lbs

Material of stays Steel Diameter at smallest part 1.5 Area supported by each stay 7 1/2 x 8 1/2 Working pressure by rules 185 lbs End plates in steam space:

Material Steel Thickness 7/8 Pitch of stays 14 1/16 How are stays secured Double nuts Working pressure by rules 246 lbs Material of stays Steel

Diameter at smallest part 6.33 Area supported by each stay 15 x 17 Working pressure by rules 258 Material of Front plates at bottom Steel

Thickness 3/4" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 12 1/4 Se. stay Working pressure of plate by rules 180 lbs

Diameter of tubes 3 1/4 Pitch of tubes 4 3/8 Material of tube plates Steel Thickness: Front 7/8 Back 3/4 Mean pitch of stays 10 15/16

Pitch across wide water spaces 13 1/2 Working pressures by rules 180 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8" x 5 1/2 (2) Length as per rule 25 1/2 Distances apart 8 1/2 Number and pitch of stays in each 2 @ 7 1/2

Working pressure by rules 218 lbs Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked separately

Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

If stiffened 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

W1252-0235

IS A DONKEY BOILER FITTED? No. If so, is a report now forwarded?
 SPARE GEAR. State the articles supplied :- Con. rod top end & bot. end bolts & nuts (2 each).
 2 main bearing bolts & nuts. Set coupling bolts & nuts. Set feed pump valves & seats.
 Set bilge pump valves & seats. Safety valve springs. Packing rings each piston.
 1 each size slide valve spindle. A.P. rod & 1/2 set valves. Air p. rod & 1/2 set valves.
 Bolts & iron of various sizes.

The foregoing is a correct description,
 KAWASAKI DOCKYARD CO., LTD.

Kawasaki Secretary Manufacturer.

Dates of Survey while building { During progress of work in shops - - 17th May to 25th Sept.
 { During erection on board vessel - - - 4th Oct to 3rd Dec.
 Total No. of visits 30
 Is the approved plan of main boiler forwarded herewith Yes
 " " " donkey " " " None

Dates of Examination of principal parts - Cylinders 14/7/15 U/c Slides 9/9/15 U/c Covers 13/8/15 U/c Pistons 9/9/15 U/c Rods 14/7/15 U/c
 Connecting rods 14/7/15 U/c Crank shaft 9/9/15 U/c Thrust shaft 3/9/15 U/c Tunnel shafts 3/9/15 U/c Screw shaft 15/9/15 U/c Propeller 7/9/15 U/c
 Stern tube 15/9/15 U/c Steam pipes tested 16/10/15 Engine and boiler seatings 18/9/15 U/c Engines holding down bolts 8/10/15 U/c
 Completion of pumping arrangements 23/9/15 Boilers fixed 16/10/15 Engines tried under steam 25/10/15
 Main boiler safety valves adjusted 23/10/15 Thickness of adjusting washers Star Bls. Port 15/16" Port Bls. Star 1" Port 7/8"
 Material of Crank shaft Steel Identification Mark on Do. R. 9.9.15 Material of Thrust shaft Steel Identification Mark on Do. R. 9.9.15
 Material of Tunnel shafts Steel Identification Marks on Do. R. 9.9.15 Material of Screw shafts Steel Identification Marks on Do. R. 15.9.15
 Material of Steam Pipes Solid drawn Steel Test pressure 600 lbs 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.
 Have the requirements of Section 49 of the Rules been complied with
 Is this machinery duplicate of a previous case No If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.
 The machinery has been made & fitted in accordance with the requirements
 of the Rules & under Special Survey, & worked satisfactorily on trial
 The vessel is eligible in my opinion for the record & LMC 12.15
 The report on Electric Lighting will follow shortly.

It is submitted that
 this vessel is eligible for
 THE RECORD & LMC 12.15.

JAW
 26/1/16
 A. L. Jones
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee ... Yen 20 : When applied for.
 Special ... Yen 387 : 4.12.1915
 Donkey Boiler Fee ... £ : When received.
 Travelling Expenses (if any) £ : 8.12.1915

Committee's Minute FRI. 28 JAN. 1916
 Assigned + Lmb 12.15

MACHINERY CERTIFICATE
 WRITTEN



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