

REPORT ON MACHINERY.

No. 653

MUN. 24 MAY 1909

Received at London Office

Date of writing Report 1-5 1909 When handed in at Local Office 1-5 1909 Port of Nagasaki
 No. in Survey held at Nagasaki Date, First Survey 27-1-07 Last Survey 23-4 1909
 Reg. Book. on the Steel Twin Screw Steamer "Kitano Maru" (Number of Visits 94) Tons { Gross 8512.38
 Net 5277.68
 Master F. E. Cope. Built at Nagasaki By whom built Nitsu Bishi S. & C. Works When built 1909.
 Engines made at Nagasaki By whom made " " " when made 1909
 Boilers made at Nagasaki By whom made " " " when made 1909
 Registered Horse Power 973 Owners Nippon Yusen Kaisha Port belonging to Tokio.
 Nom. Horse Power as per Section 28 973. Is Refrigerating Machinery fitted for cargo purposes — Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple Expansion, Twin No. of Cylinders Six No. of Cranks Size
 Dia. of Cylinders 25" 4 1/2" 69" Length of Stroke 48" Revs. per minute 80-94 Dia. of Screw shaft as per rule 14.01 Material of Lockfast as fitted 15.25 screw shaft) Iron.
 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
 in 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 — If two
 liners are fitted, is the shaft lapped or protected between the liners — Length of stern bush 6'-0"
 Dia. of Tunnel shaft as per rule 13.18 Dia. of Crank shaft journals as per rule 13.84 Dia. of Crank pin 14.75 Size of Crank webs 22 x 9 1/2 Dia. of thrust shaft under
 collars 14.25 Dia. of screw 16-6 Pitch of Screw 48 9 19 3 No. of Blades 4 State whether moveable yes Total surface 86.33 sq ft.
 No. of Feed pumps Four Diameter of ditto 4 1/2 Stroke 24 Can one be overhauled while the other is at work yes.
 No. of Bilge pumps Four Diameter of ditto 4 1/2 Stroke 24 Can one be overhauled while the other is at work yes.
 No. of Donkey Engines Four and Sizes of Pumps 10" x 13 1/2" x 10 1/2" Ballwin No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Three at 3 1/2" 9 1/2" x 6" x 9" Feed one 3" in each Tunnel and one 3" in Tunnel well. In Holds, &c. Two at 3 1/2" in each hold,
 No. of Bilge Injections 2 sizes 1 1/2" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size 8" x 4 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 Valves and 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 Bilge, Sail & Exhaust How are they protected Strong 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.
 Dates of examination of completion of fitting of Sea Connections 21-1-09 of Stern Tube 21-1-09 Screw shaft and Propeller 2-4-09
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from upper deck.
 Manufacturers of Steel Clyde & Co., Colvilles, Lanarkshire.
Palmer's & Co., Ltd. Hull & Co.

BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 14276 Is Forced Draft fitted yes No. and Description of Boilers Five Single end scotch.
 Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 18-1-09, 28-1-09 No. of Certificates 36-37
 Can each boiler be worked separately yes Area of fire grate in each boiler 56.35 sq ft No. and Description of Safety Valves to
 each boiler 2 Spring loaded 3 1/2" Area of each valve 9.62 sq in 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 24" Mean dia. of boilers 14-3" Length 11-6" Material of shell plates Steel
 Thickness 1 1/2" Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams 2 R. lap
 long. seams 3 R. 2 strips Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 10 x 5" Lap of plates or width of butt straps 22"
 Per centages of strength of longitudinal joint rivets 89% Working pressure of shell by rules 235 lbs Size of manhole in shell 16 x 12"
 plate 85% Size of compensating ring 36 x 31 x 1 1/2" No. and Description of Furnaces in each boiler 3. Bull Material Steel Outside diameter 41 3/4"
 Length of plain part top 5" Thickness of plates bottom 8" Description of longitudinal joint Welded No. of strengthening rings —
 Working pressure of furnace by the rules 241 Combustion chamber plates: Material Steel Thickness: Sides 1/6" Back 1/6" Top 1/6" Bottom 1/6"
 Pitch of stays to ditto: Sides 10 1/2 x 7" Back 8 1/4 x 8 1/2" Top 9 x 8 1/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 218
 Material of stays Steel Diameter at smallest part 1 1/2" Area supported by each stay 74.3 sq in Working pressure by rules 246 End plates in steam space:
 Material Steel Thickness 1 1/2" Pitch of stays 19 1/4 x 16 1/2" How are stays secured 2 N + washers Working pressure by rules 219 Material of stays Steel
 Diameter at smallest part 3 1/8" Area supported by each stay 318 sq in Working pressure by rules 250 Material of Front plates at bottom Steel
 Thickness 3/4" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 12 x 10" Working pressure of plate by rules 250
 Diameter of tubes 3 Ex Pitch of tubes 4 1/8 x 4 1/8" Material of tube plates Steel Thickness: Front 3/4" Back 3/4" Mean pitch of stays 8 1/2"
 Pitch across wide water spaces 1-1 1/2" Working pressures by rules 240 lbs Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 10 x 1 1/4" Length as per rule 30" Distance apart 8 1/4" Number and pitch of stays in each 2 at 9"
 Working pressure by rules 360 Superheater or Steam chest; how connected to boiler — 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 in superheater — Are they fitted with easing gear —



VERTICAL DONKEY BOILER— Manufacturers of Steel NOT ANY

No.	Description			
Made at	By whom made	When made	Where fixed	
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted	Date of adjustment
If fitted with easing gear	If steam from main boilers can enter the donkey boiler		Dia. of donkey boiler	Length
Material of shell plates	Thickness	Range of tensile 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
Working pressure of shell by rules	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	Description of joint
Working pressure of furnace by rules	Thickness of furnace crown plates		Stayed by	
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey	

SPARE GEAR. State the articles supplied:— As per rule, and in addition, Two Propeller shafts, two right and two left hand bronze propeller blades, One length crank shaft interchangeable, Two stern bushes complete with lignum vitae, One Piston Rod, one slide Rod &c &c.

The foregoing is a correct description,

W. J. ... Manufacturer.

Dates of Survey while building: During progress of work in shops— Nov. 1907, 1 Dec. 1, Jan 1908, 2 Feb 1, March 1, April 2, May, 4 June 6, July 8, Aug 11, Sep 7, October 8, November 9, December 22. During erection on board vessel— 6/1-11/1-13/1-15/1-19/1-20/1-21/1-23/1-26/1-29/1-9/2-23/2-24/2-14/3-20/3-1/4-5/4-7/4-12/4-15/4-23/4. Total No. of visits 65, 94. Is the approved plan of main boiler forwarded herewith Yes.

Dates of Examination of principal parts—Cylinders 10.12.08 Slides 27.10.08 Covers 27.10.08 Pistons 28.10.08 Rods 7.10.08 Connecting rods 12.10.08 Crank shaft 29.9.08 Thrust shaft 29.9.08 Tunnel shafts 28.4.08 Screw shafts 28.1.09 Propellers 2.4.09 Stern tubes 21.1.09 Steam pipes tested 23.2.09 Engine and boiler seatings 20.1.09 Engines holding down bolts 24.2.09 Completion of pumping arrangements 1.4.09 Boilers fixed 24.2.09 Engines tried under steam 7.4.09 Main boiler safety valves adjusted 5.4.09 Thickness of adjusting washers jamb nuts, no washers. Material of Crank shaft Steel Identification Mark on Do. LLOYDS No 30 29-9-08. Material of Thrust shaft Steel Identification Mark on Do. LLOYDS No 30 29-9-08. Material of Tunnel shafts Steel Identification Marks on Do. LLOYDS No 30 29-9-08. Material of Screw shafts Steel Identification Marks on Do. LLOYDS No 30 29-9-08. Material of Steam Pipes Lap weld Iron and Copper Test pressure 600 + 400 lbs respectively.

General Remarks (State quality of workmanship, opinions as to class, &c. These Engines and Boilers have been constructed under Special Survey, and in accordance with the Rules.

The materials used and workmanship are good. They are securely and satisfactorily fitted on board and have been seen working well under a full head of steam and are now eligible in our opinion for notation in Register Book.

Mean average speed on Trials light ship, 17.19 knots. Howden's Forced Draught fitted.

It is submitted that this vessel is eligible for THE RULES + L.M.C. 4.09. Elec. light. F.D.

JWD 24/5/09. H. C. Heron. D. Robertson, acting Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee £ 3 : - : - When applied for, 4/5/09. Special £ 103 : - : - When received, 5/5/09. Donkey Boiler Fee £ : : - Travelling Expenses (if any) £ : : -

Committee's Minute Assigned

TUES. 25 MAY 1909



© 2021 Lloyd's Register Foundation

Certificate (if required) to be sent to

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