

REPORT ON MACHINERY.

No. 2267

Received at London Office

Date of writing Report July 22nd 1929 When handed in at Local Office 19 Port of Kobe
No. in Survey held at Kobe & Yokohama Date, First Survey 3rd Decbr Last Survey 1st April 1920
Reg. Book. on the Steel Single Screw Steamer "Daiho Maru No. 1" (Number of Visits 8) Gross 1977.46
Master E. Miyajima Built at Kobe By whom built Tokoku Steamship Co. Tons Net 1152.52
Engines made at Kobe (Steel Works) By whom made Kobe Steel Works. when made 1920
Boilers made at Kobe By whom made Kobe Steel Works. when made 1920
Registered Horse Power Owners Hayashi Kisen Kaishiki Kaisha Port belonging to Hikata Wakayama
Nom. Horse Power as per Section 28 256 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple Expansion. No. of Cylinders Three No. of Cranks Three
Dia. of Cylinders 20: 33: 55 Length of Stroke 39. Revs. per minute Dia. of Screw shaft as per rule 11.75 Material of 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
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 and non-corrosive If two
liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 4-5
Dia. of Tunnel shaft as per rule 10.58 Dia. of Crank shaft journals as per rule 11.1 Dia. of Crank pin 11.4 Size of Crank webs 31x21x7 Dia. of thrust shaft under
collars 11.4 Dia. of screw 14-3 Pitch of Screw 15-6 No. of Blades 4 State whether moveable No Total surface 66.66 sq. ft.
No. of Feed pumps Two Diameter of ditto 3 3/4 Stroke 1-7 1/2 Can one be overhauled while the other is at work Yes
No. of Bilge pumps Two Diameter of ditto 3 3/4 Stroke 1-7 1/2 Can one be overhauled while the other is at work Yes
No. of Donkey Engines 3 Sizes of Pumps 2 1/2, 1 1/2, 1 1/2 No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 4 @ 2 1/2 In Holds, &c. Each 2 @ 2 1/2 dia.
Tunnel well 1 @ 2 1/2
No. of Bilge Injections 1 sizes 6" Connected to condenser, or to circulating pump Circ. pump a separate Donkey Suction fitted in Engine room & size Yes
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
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 No
What pipes are carried through the bunkers Bilge pipes How are they protected Wood casing
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 main deck

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Carnegie Steel Works. L.S.A.
Total Heating Surface of Boilers 3572 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 26 Febry No. of Certificate WP 400 LBS
Can each boiler be worked separately Yes Area of fire grate in each boiler 45.774 sq. ft. No. and Description of Safety Valves to
each boiler Two Spring loaded Area of each valve 3 3/4 dia Pressure to which they are adjusted 200 lbs Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers or woodwork 13-0 Mean dia. of boilers 13-0 Length 10-10 Material of shell plates Steel
Thickness 1/4 Range of tensile strength 28-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams DRL
long. seams TRDBS. Diameter of rivet holes in long. seams 1 5/16 Pitch of rivets 9 5/16 Lap of plates or width of butt straps 1 7/16 x 1 1/8
Per centages of strength of longitudinal joint rivets 86.44 plate 85.90 Working pressure of shell by rules 218 lbs Size of manhole in shell 16 x 12
Size of compensating ring 33 x 29 x 1 1/8 No. and Description of Furnaces in each boiler 3 Morrison Material Steel Outside diameter 40.5
Length of plain part top 9 1/16 bottom 9 1/16 Thickness of plates crown 9 1/16 bottom 9 1/16 Description of longitudinal joint Weld No. of strengthening rings 3
Working pressure of furnace by the rules 244 lbs Combustion chamber plates: Material Steel Thickness: Sides 1 1/16 25 3/32 Back 1 1/16 Top 1 1/16 Bottom 25 3/32
Pitch of stays to ditto: Sides 9 1/4 x 8 1/2 Back 8 3/4 x 8 1/2 Top 8 1/2 x 8 1/2 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 207 lbs
Material of stays Steel Area at smallest part 2.10 sq. ft Area supported by each stay 78.90 Working pressure by rules 239 lbs End plates in steam space:
Material Steel Thickness 1 1/8 Pitch of stays 17 x 16 How are stays secured Nuts Working pressure by rules 220 lbs Material of stays Steel
Area at smallest part 6.41 sq. ft Area supported by each stay 272.25 Working pressure by rules 244 lbs Material of Front plates at bottom Steel
Thickness 1 Material of Lower back plate Steel Thickness 1 Greatest pitch of stays 10 1/2 x 18 Working pressure of plate by rules 206
Diameter of tubes 3 Pitch of tubes 4 1/4 x 4 1/8 Material of tube plates Steel Thickness: Front 1 Back 3/4 Mean pitch of stays 8 1/2 x 8 1/4
Pitch across wide water spaces 13 1/8 Working pressures by rules 208 lbs Girders to Chamber tops: Material Steel Depth and
thickness of girder at centre 9 x 1 1/2 Length as per rule 30 Distance apart 8 Number and pitch of stays in each 2 @ 8 1/2
Working pressure by rules 251 lbs Steam dome: description of joint to shell % of strength of joint
Diameter Thickness of shell plates Material Description of longitudinal joint Dia. of rivet holes
Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed
SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to
Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler
Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

✓

SPARE GEAR. State the articles supplied:—

2 Connecting Rod top end bolts & nuts 1 Set piston springs
2 Connecting Rod bottom end bolts & nuts Quantity assorted bolts & nuts
2 main bearing bolts. Iron of various sizes.
1 Set Coupling bolts. 1 pair of each top & bottom end braces. An extra pair.
1 Set of feed and bilge pump valve. Slide valve spindle 2nd check valve seal.
Crank shaft propeller. 6 cyl cover bolts. 7 pump ring bolts. 12 valve tubes. 33
Condenser tubes. 100 brass 2 safety valve springs. 3 cyl escape valve springs.

The foregoing is a correct description,

THE TEIKOKU STEAMSHIP CO., LTD.

Director

Manufacturer.

Dates of Survey while building
During progress of work in shops - -
During erection on board vessel - -
Total No. of visits

3rd December and continuous attendance at Kobe Steel Works.

March 17th 19th April 1, 2, 7, 10, 13, 14

Is the approved plan of main boiler forwarded herewith

Yes.

Dates of Examination of principal parts—Cylinders

Dec 3rd

Slides

Dec 3rd

Governers

Dec 3rd

Pistons

Dec 3rd

Rods

14/10/19

Connecting rods - 23/12/19

Crank shaft - 23/7/19

Thrust shaft - 2/10/19

Tunnel shafts - 26/12/19

Screw shaft - 22/9/19

Propeller - 7/11/19

Stern tube - 7/11/19

Steam pipes tested - 1/4/20

Engine and boiler settings - 2/4/20

Engines holding down bolts - 2/4/20

Completion of pumping arrangements - 7/4/20

Boilers fixed - 2/4/20

Engines tried under steam - 10/4/20

Completion of fitting sea connections - 19/5/20

Stern tube - 17/3/20

Screw shaft and propeller - 19/3/20

Main boiler safety valves adjusted - 10/4/20

Thickness of adjusting washers - Lock nuts.

Material of Crank shaft Steel

Identification Mark on Do. R. 9.8

Material of Thrust shaft Steel

Identification Mark on Do. 20.12.19

Material of Tunnel shafts Steel

Identification Marks on Do. 31.12.19

Material of Screw shafts Steel

Identification Marks on Do. 14.05.20

Material of Steam Pipes Copper

Test pressure - 400 lb.

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

Engines only.

Is this machinery duplicate of a previous case

If so, state name of vessel

Paga Maru

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

The machinery has been made and fitted under special survey in accordance with the requirements of the Rules and the materials and workmanship have been found good.

In our opinion the machinery is eligible for the Record of L.M.C. 4.20.

It is submitted that this vessel is eligible for THE RECORD, + L.M.C. 4.20 F.D.

Roll

1/9/20

J.P.

The amount of Entry Fee ...

£ Yen 20

When applied for,

Special ...

£ Yen 574

June 19th 1920

Testing Donkey Boiler Fee ...

£ 50

When received,

Travelling Expenses (if any) £

June 30th 1920

Committee's Minute

FRI. SEP. 3 1920

Assigned

+ L.M.C. 4.20

MACHINERY CERT. WRITTEN.

R. P. Batchelor & W. Lawton
Engineer Surveyor to Lloyd's Register of Shipping.



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