

REPORT ON MACHINERY.

Received at London Office

WED. 30th NOV. 1918

Date of writing Report 2nd Octr 19 18 When handed in at Local Office

19 Port of Yokohama

No. in Survey held at Tokyo

Date, First Survey June 19th

Last Survey Sept 27th, 19 18.

Reg. Book.

(Number of Visits 16

on the Single. S. S. " Taizan Maru "

Tons { Gross 3192.90
Net 1952.16

Master Built at Tokyo

By whom built Ishikawajima S. B. & E Co Ld When built 9 - 18

Engines made at Tokyo

By whom made Ishikawajima S. B. & E Co Ld when made 9 - 18

Boilers made at Tokyo

By whom made Ishikawajima S. B. & E Co Ld when made 9 - 18

I.H.P. Registered Horse Power 1670

Owners Hashimoto Kisen Kaisha

Port belonging to Uraga

Nom. Horse Power as per Section 28 279

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

Dia. of Cylinders 22-37-61

Length of Stroke 42

Revs. per minute 77

Dia. of Screw shaft as per rule 12.85 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

in the propeller boss Yes If the liner is in more than one length are the joints burned X

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 Tight

If two

liners are fitted, is the shaft lapped or protected between the liners XX

Length of stern bush 4 - 9 1/2

Dia. of Tunnel shaft as per rule 11.2

as fitted 11 1/2

Dia. of Crank shaft journals as per rule 11.77

as fitted 12 1/2

Dia. of Crank pin 12 1/2

Size of Crank webs 16 1/2 x 7 1/2

Dia. of thrust shaft under collars 12 1/2

Dia. of screw 16'-0"

Pitch of Screw 16'-0"

No. of Blades 4

State whether moveable No

Total surface 74 sq ft

No. of Feed pumps 2

Diameter of ditto 3 1/2

Stroke 22

Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2

Diameter of ditto 4"

Stroke 22

Can one be overhauled while the other is at work Yes

No. of Donkey Engines 3

Sizes of Pumps 6 x 4 x 6
7 x 5 x 7
7 1/2 x 9 x 10

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 4 of 3"

In Holds, &c. No. 1 hold 2 - 3", No. 2 hold 2 - 3",

No. 3 hold 2 - 3", Shaft tunnel 1 - 2 1/2".

No. of Bilge Injections 1 sizes 5 1/2

Connected to condenser to circulating pump Yes

Is a separate Donkey Suction fitted in Engine room & size Yes 3 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 Yes

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 XX

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 Top platform

BOILERS, &c.—(Letter for record S.)

Manufacturers of Steel Worth Bros

2SB.

Total Heating Surface of Boilers 3640 sq ft

Forced Draft fitted Yes

No. and Description of Boilers 2 Multitubular

Working Pressure 180

Tested by hydraulic pressure to 360

Date of test 31-7-18

No. of Certificate 26

Can each boiler be worked separately Yes

Area of fire grate in each boiler 46.5 sq ft

No. and Description of Safety Valves to

each boiler 2, Spring loaded

Area of each valve 9.62 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 18"

Mean dia. of boilers 13'-6"

Length 11'-6"

Material of shell plates S

Thickness 1 1/2

Range of tensile strength 28-32

Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams D.R.

long. seams T.R.D.R.S.

Diameter of rivet holes in long. seams 1 1/2

Pitch of rivets 8 5/8

Lap of plates or width of butt straps 18 1/2

Per centages of strength of longitudinal joint

rivets 84
plate 85

Working pressure of shell by rules 206

Size of manhole in shell 16 x 12

Size of compensating ring 36"x32"x1 1/2"

No. and Description of Furnaces in each boiler 3 Morr

Material S

Outside diameter 40 1/2

Length of plain part top X

bottom X

Thickness of plates 1 7/32

Description of longitudinal joint Weld

No. of strengthening rings None

Working pressure of furnace by the rules 202

Combustion chamber plates: Material S

Thickness: Sides 25/32

Back 21/32

Top 23/32

Bottom 25/32

Pitch of stays to ditto: Sides 10x8

Back 8 1/2 x 8 1/2

Top 8x8 1/2

If stays are fitted with nuts or riveted heads Nuts

Working pressure by rules 217

Material of stays S

Area at smallest part 1.79

Area supported by each stay 66.5 sq in

Working pressure by rules 242

End plates in steam space:

Material S

Thickness 1 1/2

Pitch of stays 16 1/2 x 18

How are stays secured D.Nuts

Working pressure by rules 190

Material of stays S

Area at smallest part 6.33

Area supported by each stay 298.5 sq in

Working pressure by rules 220

Material of Front plates at bottom S

Thickness 29/32

Material of Lower back plate S

Thickness 27/32

Greatest pitch of stays 14x8 1/2

Working pressure of plate by rules 182

Diameter of tubes 3

Pitch of tubes 4 1/2 x 4 1/2

Material of tube plates S

Thickness: Front 29/32

Back 7

Mean pitch of stays 4 5/8

Pitch across wide water spaces 14

Working pressures by rules 276

Girders to Chamber tops: Material S

Depth and

thickness of girder at centre 11

Length as per rule 34.5

(36)

Distance apart 10

Number and pitch of stays in each 3 - 8 See above

Working pressure by rules 210

Steam dome: description of joint to shell XX

% of strength of joint X

Diameter X

Thickness of shell plates X

Material X

Description of longitudinal joint

Diam. of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

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

Lloyd's Register

FW1170085

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

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— One propeller, 3 valve spindles, One air pump rod, One circulating pump rod, Each set of Hp, IP, & LP packing rings, for piston, One complete set of top & bottom ends & bolts for One connecting rod, one quarter set of total number of ^{Junk} ring bolts, One complete set of main bearing bolts for one bearing, One complete set of coupling bolts & nuts for one coupling, One safety valve spring for each main boiler, One half set of air pump valves, One half set of circulating pump valve, One set of ecc. rod & bolts, a quantity of assorted bolts & nuts.

The foregoing is a correct description,

Feed & bridge pump valves?

R. Izumi

Manufacturer.

Dates of Survey while building { During progress of work in shops -- June 19, 27, July 3, 15, 24, 31, August 2, 14, 17, 27, Sept 2, 4, 5, During erection on board vessel -- Sept 11, 21, 29, Total No. of visits 16

Is the approved plan of main boiler forwarded herewith No " " " donkey " " " x

Dates of Examination of principal parts—Cylinders 27-8-18 Slides 2-9-18 Covers 27-8-18 Pistons 2-9-18 Rods 31-5-18 Connecting rods 9-11-17 Crank shaft 19-12-17 Thrust shaft 15-9-17 Tunnel shafts 29-6-18 Screw shaft 7-4-18 Propeller 2-9-18 Stern tube 17-8-18 Steam pipes tested 10-9-18 Engine and boiler seatings 14-8-18 Engines holding down bolts 21-9-18 Completion of pumping arrangements 21-9-18 Boilers fixed 10-9-18 Engines tried under steam 27-9-18 Completion of fitting sea connections 4-9-18 Stern tube 2-9-18 Screw shaft and propeller 4-9-18 Main boiler safety valves adjusted 27-9-18 Thickness of adjusting washers Port boiler 11" 11" Starb boiler 7" 8"

Material of Crank shaft S Identification Mark on Do. R.O.B. Material of Thrust shaft S Identification Mark on Do. A.L.J. Material of Tunnel shafts S Identification Marks on Do. R.O.B. Material of Screw shafts S Identification Marks on Do. R.O.B. Material of Steam Pipes Steel & Copper Test pressure 540, 360

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 XX

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 of this vessel has been

built under special Survey in accordance with the approved plans and the society's Rules, The materials and workmanship are good, and the machinery has been satisfactorily tried under steam, The vessel being eligible in my opinion for record LMC 9-18.

Duplicate S. S. "Shinryu Maru" No. 2398.

It is submitted that this vessel is eligible for THE RECORD. + LMC 9.18. F.D.

J.W.D. 21/11/18. G.P.K.

The amount of Entry Fee ... £ 20.00 When applied for, Special ... £ 510.00 27.9.18 Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) £ : : 1-10-18

Jas Cairns

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 22 NOV. 1918

Assigned

+ LMC 9.18 F.D.



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Certificate (if required) to be sent to The Surveyors are requested not to write on or below the space for Committee's Minute.