

REPORT ON MACHINERY.

Received at London Office THU. JUL. 28 1921

Date of writing Report 2nd JUNE 1921 When handed in at Local Office 5th JUNE 1921 Port of YOKOHAMA

No. in Survey held at TOKYO Date, First Survey 27th AUGUST 1920 Last Survey 23rd MAY 1921

Reg. Book. on the STEEL SINGLE SCREEN STEAMER "KOKI MARU" (Number of Visits 4-9) Tons Gross 5693.74
Net 3496.11

Master E. FUKUDA Built at TOKYO By whom built ISHIKAWAJIMA S. B. & E. CO When built 1921

Engines made at TOKYO By whom made ISHIKAWAJIMA S. B. & E. CO when made 1921

Boilers made at TOKYO By whom made ISHIKAWAJIMA S. B. & E. CO when made 1920 & 1921

Registered Horse Power Owners HASHIMOTO KISEN KAISHA Port belonging to ATAMIMACHI

Nom. Horse Power as per Section 28 515 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 26"-45 1/2"-72" Length of Stroke 48" Revs. per minute 79 Dia. of Screw shaft 15 1/2" 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 no 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 yes

If two liners are fitted, is the shaft lapped or protected between the liners no Length of stern bush 63 3/4"

Dia. of Tunnel shaft 13.75" Dia. of Crank shaft journals 14.12" Dia. of Crank pin 14.5" Size of Crank webs 27 1/2" Dia. of thrust shaft under collars 14.5" Dia. of screw 17.9" Pitch of Screw 19'-1" No. of Blades 4 State whether moceable yes Total surface 97.6 sq ft

No. of Feed pumps 2 Diameter of ditto 4 1/2" Stroke 24" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 24" Can one be overhauled while the other is at work yes

No. of Donkey Engines 105. DONKEY Sizes of Pumps 7 1/2" x 7" DUPLEX No. and size of Suctions connected to both Bilge and Donkey pumps 2 WOODSON FEED PUMPS 10 1/2" x 9" x 18"

In Engine Room 4. 3 1/2" & 1.5" In Holds, &c. No. 1, 1.3 1/2"; No. 2, 2.3 1/2"; No. 3, 4.3 1/2"

No. of Bilge Injections 1 sizes 9" Connected to condenser, or to circulating pump circ pump Is a separate Donkey Suction fitted in Engine room & size yes 5"

Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes Are the sluices in 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

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 No. 1 & 2 HOLD SUCTIONS How are they protected WOOD CEILING

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 5) Manufacturers of Steel WORTH STEEL CO. CAMBRIA STEEL CO. GLASGOW. IRON & STEEL CO.

Total Heating Surface of Boilers 7376 Is Forced Draft fitted yes No. and Description of Boilers 3 Cylindrical Multitubular

Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 27-12-20 No. of Certificate 153

Can each boiler be worked separately yes Area of fire grate in each boiler 58.2 sq ft No. and Description of Safety Valves to each boiler 2. Spring load

Area of each valve 11.04 sq ft 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 26" Mean dia. of boilers 14'-3" Length 11'-6" Material of shell plates Steel

Thickness 1 1/2" Range of tensile strength 28632 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double

long. seams DOUBLE STRAP TREAD RIVET Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 10" Lap of plates or width of butt straps 22"

Per centages of strength of longitudinal joint 93 Working pressure of shell by rules 223 Size of manhole in shell 16 x 12

Size of compensating ring 36 1/2" x 32 1/2" No. and Description of Furnaces in each boiler 3 Mason Material Steel Outside diameter 3'-8 5/8"

Length of plain part top 2" Thickness of plates bottom 5/8" Description of longitudinal joint welded No. of strengthening rings 3-10 1/4

Working pressure of furnace by the rules 225 Combustion chamber plates: Material Steel Thickness: Sides 4 5/16" Back 1 1/16" Top 4 5/16" Bottom 1 5/16"

Pitch of stays to ditto: Sides 10 1/2" x 7 1/2" Back 8 1/2" x 9 3/8" Top 8" x 9 1/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 206

Material of stays Steel Area at smallest part 2.03 Area supported by each stay 78.75 Working pressure by rules 229 End plates in steam space: Material Steel Thickness 1 3/16"

Pitch of stays 16 1/2" x 19" How are stays secured NUTS & WASHERS Working pressure by rules 211 Material of stays Steel

Area at smallest part 7.67 sq ft Area supported by each stay 313.5 Working pressure by rules 254 Material of Front plates at bottom Steel

Thickness 3/4" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 8 1/2" Working pressure of plate by rules 269

Diameter of tubes 3" Pitch of tubes 4 1/8" x 4 1/4" Material of tube plates Steel Thickness: Front 3/4" Back 3/4" Mean pitch of stays 8 3/8"

Pitch across wide water spaces 13 1/2" Working pressures by rules 225 Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 9" x 1 3/4"

Length as per rule 30 3/4" Distance apart 8" Number and pitch of stays in each 2-9 1/4"

Working pressure by rules 225 Steam dome: description of joint to shell no % of strength of joint no

Diameter no Thickness of shell plates no Material no Description of longitudinal joint no Diam. of rivet holes no

Pitch of rivets no Working pressure of shell by rules no Crown plates no Thickness no How stayed no

SUPERHEATER. Type no Date of Approval of Plan no Tested by Hydraulic Pressure to no

Date of Test no Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler no

Diameter of Safety Valve no Pressure to which each is adjusted no Is Easing Gear fitted no

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— One crank shaft, one screw shaft, one prop. blade, one set top end
propeller with bolts and nuts, one set bottom end braces with bolts & nuts, one main bearing
with bolts & nuts, one set coupling bolts, one set feed & bilge valves, one set piston rings for
each cylinder, 24 boiler tubes 53 condenser tubes, 3 safety valve springs, 2 ecc rods
1 valve spindle 1/2 set air pump valves a quantity of assorted bolts and nuts
and iron of various sizes

The foregoing is a correct description,

THE ISHIKAWAJIMA SHIPBUILDING
AND ENGINEERING CO., LTD., TOKYO,

J. Uchida Manufacturer.

Dates of Survey while building: During progress of work in shops - 1920 Aug 21 Sept 14 21 25 27 Oct 8 15 21 26 30 Nov 5 15 30 Dec 3 11 14 18 20 23 27 Jan 7 11 14 18 25 28 Feb 17 24 28
During erection on board vessel - 1920 Nov 19 123 MAR 4 12 21 31 APR 16 14 18 25 MAY 3 9 16 18 23
Total No. of visits 4/8

Is the approved plan of main boiler forwarded herewith? No

Dates of Examination of principal parts—Cylinders 8-10-20 Slides 14-1-21 Covers 15-11-20 Pistons 5-11-20 Rods 5-11-20
Connecting rods 5-11-20 Crank shaft 5-11-20 Thrust shaft 25-4-21 Tunnel shafts 25-4-21 Screw shaft 18-11-20 Propeller 18-11-20
Stern tube 26-10-20 Steam pipes tested 21-3-21 Engine and boiler seatings 19-11-20 Engines holding down bolts 14-4-21
Completion of pumping arrangements 23-5-21 Boilers fixed 18-4-21 Engines tried under steam 16-5-21
Completion of fitting sea connections 12-3-21 Stern tube 4-3-21 Screw shaft and propeller 4-3-21

Main boiler safety valves adjusted 9-5-21 Thickness of adjusting washers PORT 3/4 3/4 CENT 1 1/16 1/4 STD 5/8 7/16
Material of Crank shaft STEEL Identification Mark on Do. LLOYDS R.O.B. Material of Thrust shaft STEEL Identification Mark on Do. LLOYDS R.O.B.
Material of Tunnel shafts STEEL Identification Marks on Do. LLOYDS R.O.B. Material of Screw shafts STEEL Identification Marks on Do. LLOYDS R.O.B.
Material of Steam Pipes STEEL Test pressure 600 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? ✓
Is this machinery duplicate of a previous case? YES If so, state name of vessel CLYDE MARU. MILAN MARU &c.

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 approved plans and
the Society's Rules. The materials and workmanship are good.
The machinery tried under steam and found satisfactory.
eligible in my opinion for record of LMC 5-21

It is submitted that
this vessel is eligible for
THE RECORD + LMC 5.21 FD CL

Bell 5/8/21

Yokohama

The amount of Entry Fee ... Yen 60.00
Special ... Yen 798.00
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ 144.00

Alfred Ewing
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
Assigned

FRI. 5 AUG. 1921

+ LMC 5.21

