

REPORT ON MACHINERY.

No. 2766
TUE. MAY 25 1920

Received at London Office

Date of writing Report

19

When handed in at Local Office

19

Port of ZakNo. in Survey held at Osaka + ImoshimaDate, First Survey 1st July, 1919 Last Survey 13th Febr. 1920

Reg. Book.

on the Steel Single Screw Steamer "HAGUE MARU"(Number of Visits 40)Gross 5812.98Net 3500.54Master K. KitanoBuilt at ImoshimaBy whom built The Osaka Iron Works Ltd.When built 1919Engines made at OsakaBy whom made The Osaka Iron Works Ltd.when made 1919Boilers made at doBy whom made dowhen made 1919

Registered Horse Power

Owners The Osaka Shosen Kaisha Port belonging to OsakaNom. Horse Power as per Section 28 559.3Is Refrigerating Machinery fitted for cargo purposes NoIs Electric Light fitted yes

ENGINES, &c.—Description of Engines

Triple ExpansionNo. of Cylinders ThreeNo. of Cranks 3Dia. of Cylinders 26½": 44½": 74½" Length of Stroke 51" Revs. per minute 78.75 Dia. of Screw shaft as per rule 15.41 Material of Steel
as fitted 15¾" screw shaftIs 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 tightin 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 partbetween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓ If twoliners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 5'-6"Dia. of Tunnel shaft as per rule 14.02 Dia. of Crank shaft journals as per rule 14.72 Dia. of Crank pin 14½" Size of Crank webs 9¼x27½" Dia. of thrust shaft undercollars 14½" Dia. of screw 18'-3" Pitch of Screw 18'-3" No. of Blades 4 State whether moveable yes Total surface 100 sqNo. of Feed pumps Two Diameter of ditto 4" Stroke 27" Can one be overhauled while the other is at work yesNo. of Bilge pumps Two Diameter of ditto 4½" Stroke 27" Can one be overhauled while the other is at work yesNo. of Donkey Engines Three Sizes of Pumps Weir's Feed 8"x10"x11 dupt. No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room Two 3½" Ball. 9½x12x10 dupt. Gen. Sew. 1½x5½x6 dupt. In Holds, &c. No. 1, 2, 4 + 5 @ 3½" in eachDry tank 2 @ 3½ + One @ 6"No. of Bilge Injections 1 sizes 9" Connected to condenser, or to circulating pump ✓ Is a separate Donkey Suction fitted in Engine room & size yes 3½"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 NoneAre all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Large valves; Small CocksAre 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 aboveAre 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 yesWhat pipes are carried through the bunkers Electric Wire in pipes + Soil pipes How are they protected By wood casings + Iron bandsAre all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yesAre the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yesIs the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from 2nd gratingBOILERS, &c.—(Letter for record S.) Manufacturers of Steel Midvale Steel + Ordnance Co. Cambria Steel Co.Total Heating Surface of Boilers 7988.4 Is Forced Draft fitted yes No. and Description of Boilers Three single endedWorking Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 18, 22 + 25/12/19 No. of Certificate HYD. TEST 18-12-19, 22-12-19, 25-12-19Can each boiler be worked separately yes Area of fire grate in each boiler 61.1 sq No. and Description of Safety Valves toeach boiler Two Area of each valve 7.0686 sq Pressure to which they are adjusted 205 lbs. Are they fitted with easing gear yesSmallest distance between boilers or uptakes and bunkers or woodwork ✓ Mean dia. of boilers 15'-0" Length 12'-0" Material of shell plates SteelThickness 1½" Range of tensile strength 28-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Doub. rivdlong. seams Double riveted Diameter of rivet holes in long. seams 1½" Pitch of rivets 9/8" + 4 15/16" Lap of plates or width of butt straps 1'-10" 13/8 (in) 1/8 (ex)Per centages of strength of longitudinal joint rivets 88.7 Working pressure of shell by rules 228 lbs. Size of manhole in shell 12" x 16"Size of compensating ring 34" x 38" x 1½" No. and Description of Furnaces in each boiler Three Morisons Material Steel Outside diameter 48¾"Length of plain part top ✓ Thickness of plates crown 2 1/32 Description of longitudinal joint Weld No. of strengthening rings ✓Working pressure of furnace by the rules 219 lbs. Combustion chamber plates: Material Steel Thickness: Sides 1 1/16" Back 1 1/16" Top 1 1/16" Bottom 1 5/16"Pitch of stays to ditto: Sides 8½" x 8½" Back 8½" x 9" Top 8" x 9" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 213 lbs.Material of stays Steel Area at smallest part 2.1 sq Area supported by each stay 76.5 sq Working pressure by rules 247 lbs. End plates in steam space:Material Steel Thickness 1 1/32" Pitch of stays 18" x 20" How are stays secured Doub. nuts Working pressure by rules 214 lbs. Material of stays SteelArea at smallest part 7.66 sq Area supported by each stay 360 sq Working pressure by rules 221 lbs. Material of Front plates at bottom SteelThickness 3/4" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 14 5/8" wide Working pressure of plate by rules 200 lbs.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 1/4" Working pressures by rules 180 lbs. Girders to Chamber tops: Material Steel Depth andthickness of girder at centre 10½": 7 1/8" x 2 Length as per rule 36 1/16" Distance apart 9" Number and pitch of stays in each 3 @ 8"Working pressure by rules 249 lbs. Steam dome: description of joint to shell ✓ % of strength of joint

Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. Type

Date of Approval of Plan

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

0900-181800-0060

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Two Connecting Rod bolts + nuts Iron of various sizes. Set of Eccentric rods
Two Connecting Rod bottom end bolts + nuts. One spare propeller shaft. Air pump rod.
Two Main bearing bolts. One propeller blade. Set feed check valves
One set of feed of bilge pump valves. One set Crank pin Crosshead brasses. Two Safety valves
One set of piston springs. One set of coupling bolts. One Quadrant.
Quantity of assorted bolts + nuts. Set of slide valve rods. 20 plain boiler tube

The foregoing is a correct description,

S. Kamei



Dates of Survey while building
During progress of work in shops -- 1919 July 9, 15, 22, 26; Aug 6, 18; Sept. 5, 12, 19, 26, 30; Oct 15, 21, 24, 28; Nov. 10, 11, 14, 19; Dec. 8, 11, 15, 18, 22, 25, 27, 28
During erection on board vessel -- 1919 Dec. 15, 19, 21, 27; Jan. 7, 13, 16, 21, 22, 24; Febr. 4, 12 + 13 1920
Total No. of visits 40

Is the approved plan of main boiler forwarded herewith ☒ forwarded with Hoyer's plan

Dates of Examination of principal parts—Cylinders 10-11-19 etc. Slides 11-11-19 etc. Covers 10-11-19 etc. Pistons 11-11-19 etc. Rods 11-12-19 etc.
Connecting rods 18-8-19 etc. Crank shaft 15-10-19 Thrust shaft 3-9-19 Tunnel shafts 7-7-19 etc. Screw shaft 27-10-19 etc. Propeller 10-1-19 etc.
Stern tube 15-12-19 Steam pipes tested 24-1-20 Engine and boiler seatings 28-10-19 Engines holding down bolts 21-1-19 etc.
Completion of pumping arrangements 24-1-20 Boilers fixed 7-1-20 Engines tried under steam 29-1-20
Completion of fitting sea connections 15-12-19 Stern tube 19-12-19 Screw shaft and propeller 7-1-20
Main boiler safety valves adjusted 29-1-20 Thickness of adjusting washers Lock nuts
Material of Crank shaft Steel Identification Mark on Do. R.O.B. R Material of Thrust shaft Steel Identification Mark on Do. Y.J. R
Material of Tunnel shafts Steel Identification Marks on Do. Y.J. R Material of Screw shafts Steel Identification Marks on Do. Y.J. R
Material of Steam Pipes Steel Test pressure 600 lbs. 1616 3-11-19 Y.J. R
Is an installation fitted for burning oil fuel 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 If so, state name of vessel S/S. HORAI SAN MARU (Rpt. No. 2141)

General Remarks (State quality of workmanship, opinions as to class, &c. S/S. TAIBU MARU (Koh. Rpt. No. 2293) S/S. HOYEI SAN MARU (Koh. Rpt. No. 240)

The Shafting was forged + rough turned at the Sizer & Co. Company, Buffalo, and finished at the Osaka Iron Works, except the Crank shafts, which were forged + finished at the Kobe Steel Works.
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.
The Machinery is in my opinion eligible for the record of L.M.C 2-20.

It is submitted that this vessel is eligible for THE RECORD.

T.L.M.C. 2.20. F.D.

2/6/20.

The amount of Entry Fee ... Yen : 30.- When applied for, Special ... Yen 840.- Feb. 14th 1920 Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) £ : 80.- Mar. 5th 1920

Committee's Minute FRI. JUN. 4 1920

Assigned + L.M.C. 2.20 F.D.

John Sim & Y. Jo. Engineer Surveyor to Lloyd's Register of Shipping



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