

REPORT ON MACHINERY.

No. 2766
TUE. MAY 25 1920

Received at London Office

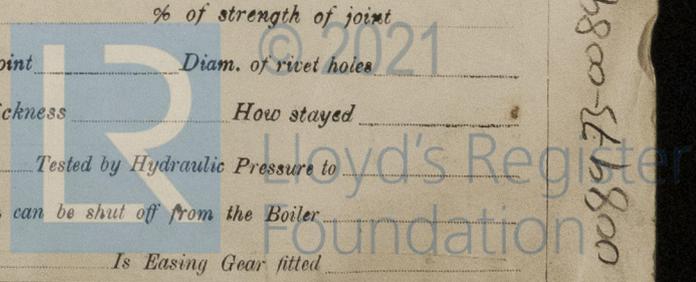
Date of writing Report 19 When handed in at Local Office 19 Port of Osaka
 No. in Survey held at Osaka + Immoshima Date, First Survey 9th July, 1919 Last Survey 13th Febr. 1920
 Reg. Book. on the Steel Single Screw Steamer "HAGUE MARU" (Number of Visits 40)
 Master K. Kitano Built at Immoshima By whom built The Osaka Iron Works Ltd. Tons { Gross 5812.98
 Engines made at Osaka By whom made The Osaka Iron Works Ltd. when made 1919 Net 3500.54
 Boilers made at do By whom made do when made 1919
 Registered Horse Power Owners The Osaka Shosen Kabushiki Kaisha Port belonging to Osaka
 Nom. Horse Power as per Section 28 559.3 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders Three No. of Cranks 3
 Dia. of Cylinders 26 1/2" : 44 1/2" : 74 1/2" Length of Stroke 51" Revs. per minute 78.75 Dia. of Screw shaft as per rule 15.41 Material of Steel
 as fitted 15 3/4" screw shaft
 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 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 14 7/8" Size of Crank webs 9 1/4" x 27 1/2" Dia. of thrust shaft under
 collars 14 7/8" Dia. of screw 18'-3" Pitch of Screw 18'-3" No. of Blades 4 State whether moveable yes Total surface 100 sq
 No. of Feed pumps Two Diameter of ditto 4" Stroke 27" Can one be overhauled while the other is at work yes
 No. of Bilge pumps Two Diameter of ditto 4 1/2" Stroke 27" Can one be overhauled while the other is at work yes
 No. of Donkey Engines Three Sizes of Pumps Weir's Feed 8" x 10" x 11" dupl. No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two 3 1/2" Ball. 9 1/2" x 12" x 10" dupl. Gen. Serv. 7 1/2" x 5 1/2" x 6" dupl. In Holds, &c. Nos. 1, 2, 4 + 5 @ 3 1/2" in each
Dry tank 2 @ 3 1/2" + One @ 6"
 No. of Bilge Injections 1 sizes 9" Connected to condenser, or to circulating pump Cur. p.p. 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 None
 Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Large valves; Small 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 Electric Wire in pipes + Soil pipes How are they protected By wood casings + Iron bands.
 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 2nd grating

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel Midvale Steel + Ordnance Co, Cambria Steel Co.
Am. spiral pipe works, Champion rivet Co. J.S.B.
 Total Heating Surface of Boilers 7988.4 Is Forced Draft fitted yes No. and Description of Boilers Three single ended
 Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 18, 22 + 25/12/19 No. of Certificate HYD. TEST 100 LBS 18-12-19, 22-12-19, 25-12-19
 Can each boiler be worked separately yes Area of fire grate in each boiler 61.1 sq No. and Description of Safety Valves to
 each boiler Two Area of each valve 7.0686 sq 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 ✓ Mean dia. of boilers 15'-0" Length 12'-0" Material of shell plates Steel
 Thickness 1 1/2" Range of tensile strength 28-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Doub. rivd
Triple riveted long. seams Doub. straps Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 9 7/8" + 4 15/16" Lap of plates or width of butt straps 1'-10" (1 3/8" in) (1 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"
 plate 84.8 Size of compensating ring 34" x 38" x 1 1/8" No. and Description of Furnaces in each boiler Three Morrison Material Steel Outside diameter 48 3/4"
 Length of plain part top ✓ Thickness of plates crown 2 1/32 Description of longitudinal joint Weld No. of strengthening rings ✓
 bottom ✓ 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 8 1/2" x 8 1/2" Back 8 1/2" 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 3/32" Pitch of stays 18" x 20" How are stays secured Doub. nuts Working pressure by rules 214 lbs. Material of stays Steel
 Area 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 Steel
 Thickness 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 and
 thickness of girder at centre 10 1/2" : 7 1/2" 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

UPERHEATER. 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 _____

0900-184800-0060
090973-00848-0060



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,

I Name



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, 27 1/2
 During erection on board vessel --- 1919 Dec. 15, 19, 21, 27; 1920 Jan. 7, 13, 16, 21, 22, 24; Febr. 4, 12 + 13 1/2
 Total No. of visits 40

Is the approved plan of main boiler forwarded herewith forwarded with "Hoyeisan" "donkey"

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 8-8-19 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 21-1-20
 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. 27-1-19, 2-5-19, 3-5-19 LLOYDS R.O.B. R. Material of Thrust shaft Steel Identification Mark on Do. 3-9-19 Y.J.
 Material of Tunnel shafts Steel Identification Marks on Do. 9-7-19, 15-7-19, 22-7-19, 26-7-19, 6-8-19 LLOYDS Y.J. R. Material of Screw shafts Steel Identification Marks on Do. 579 LLOYDS 27-1-19 Y.J.
 Material of Steam Pipes Steel Test pressure 600 lbs. spare: 1616 LLOYDS 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 "HORAISAN MARU" (Rpt. No. 2141)

General Remarks (State quality of workmanship, opinions as to class, &c. S/S "TAIBU MARU" (Kobe Rpt. No. 2293) S/S "HOYEISAN MARU" (Kobe Rpt. No. 240)
 The shafting was forged + rough turned at the Sizer & 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.
 J.S. 2/6/20. A.P.S.

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

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

Committee's Minute FRI. JUN. 4 1920 Assigned + L.M.C. 2.20 F.D.



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