

Rpt. 4.

## REPORT ON MACHINERY.

No. 2685

Received at London Office

FEB. 10 1920

Date of writing Report Dec 23<sup>rd</sup> 1919 When handed in at Local OfficePort of KobeNo. in Survey held at Kobe  
Reg. Book.Date, First Survey May 1<sup>st</sup> Last Survey Dec. 11<sup>th</sup> 1919(Number of Visits 61)on the Steel Single Screw Steamer "EASTERN MOON"Tons { Gross 5974.64  
Net 4292.78Master S. KARAKIBuilt at KobeBy whom built Kawasaki Dockyard Co. Ltd. When built 1919Engines made at KobeBy whom made Kawasaki Dockyard Co. Ltd.when made 1919Boilers made at doBy whom made dowhen made 1919

Registered Horse Power

Owners United States Shipping Board Port belonging to KobeNom. Horse Power as per Section 28 440Is Refrigerating Machinery fitted for cargo purposes NoIs Electric Light fitted yes

## ENGINES, &amp;c.—Description of Engines

Triple ExpansionNo. of Cylinders ThreeNo. of Cranks 3Dia. of Cylinders 26: 43½: 72 Length of Stroke 48" Revs. per minute 70 Dia. of Screw shaft as per rule 15.41 Material of Steel  
as fitted 16" screw shaft)Is the screw shaft fitted with a continuous liner the whole length of the stern tube no liner Is the after end of the liner made water tight  
in the propeller boss ✓ 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'-5¼"Dia. of Tunnel shaft as per rule 13.48 Dia. of Crank shaft journals as per rule 14.15 Dia. of Crank pin 14¾ Size of Crank webs 9½x20½ Dia. of thrust shaft under  
as fitted 13¾ as fitted 14¾ collars 14¾ Dia. of screw 17'-6" Pitch of Screw 19'-0" Mean No. of Blades 4 State whether moveable yes Total surface 100 sq. ft.  
+ 268 at pin + journalNo. of Feed pumps One Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work yes (with Weir's Feed)No. of Bilge pumps Two Diameter of ditto 5" Stroke 24" Can one be overhauled while the other is at work yesNo. of Donkey Engines Three Sizes of Pumps Bal. 10x11x12" dup. No. and size of Suctions connected to both Bilge and Donkey pumps  
Gen. Serv. 9½x7x24" two  
Donkey 5½x3½x9" In Holds, &c. No. 1, 3 + 4 Hold each two 3½"  
One 3½" to tunnel Well No. 2 Hold two 4"No. of Bilge Injections 1 sizes 9" Connected to condenser, or to circulating pump Cur. P. 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 Larger Valves, Smaller 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 None How are they protected ✓Are 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 upr platform of G. R.BOILERS, &c.—(Letter for record S.) Manufacturers of Steel Carnegie Steel Co., Illinois Steel Co., Marne Furnace Assn.  
2252x2+1132 (AUX. BLR) + Kawasaki Hyogo Steel Works. 2 SB & 1 Aux SBTotal Heating Surface of Boilers 5636 Is Forced Draft fitted yes No. and Description of Boilers Two 5-b + Aux. S. G.  
No. 1 No. 2 No. of Certificate W.L.R. W.P. 200 Lbs.Working Pressure 200 Lbs. Tested by hydraulic pressure to 400 Lbs. Date of test 8-10-19 15-10-19Can each boiler be worked separately yes Area of fire grate in each boiler 60½ No. and Description of Safety Valves toeach boiler Two Spring loaded Area of each valve 3¾ dia. Pressure to which they are adjusted 205 Lbs. Are they fitted with easing gear yesSmallest distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 14'-6" Length 12'-0" Material of shell plates SteelThickness 1⅜" Range of tensile strength 2678 to 32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams Ends Double  
Double riveted Mid. Treblelong. seams Double straps Diameter of rivet holes in long. seams 1⅞" Pitch of rivets 9⅞" + 4⅞" Lap of plates or width of butt straps 20⅞" + 1⅜"Per centages of strength of longitudinal joint 95.84 Working pressure of shell by rules 200 Lbs. Size of manhole in shell 16" x 12"Size of compensating ring (1½" flange) 1⅝" No. and Description of Furnaces in each boiler 3 Morrison Material Steel Outside diameter 48¼"Length of plain part top Thickness of plates crown 2⅜ Description of longitudinal joint Weld No. of strengthening rings ✓Working pressure of furnace by the rules 221 Lbs. Combustion chamber plates: Material Steel Thickness: Sides 1⅞" Back 1⅞" Top 1⅞" Bottom 7/8"Pitch of stays to ditto: Sides 8⅝" x 8½" Back 8½" x 9" Top 8½" x 9⅞" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 203 Lbs.Material of stays Steel Area at smallest part 2.1 Area supported by each stay 8½" x 9⅞" Working pressure by rules 230 Lbs. End plates in steam space:Material Steel Thickness 1⅝" Pitch of stays 19¾" x 20½" How are stays secured Double nuts Working pressure by rules 201 Lbs. Material of stays SteelArea at smallest part 10" Area supported by each stay 19¾" x 20½" Working pressure by rules 260 Lbs. Material of Front plates at bottom SteelThickness 1⅜" Material of Lower back plate Steel Thickness ¾" Greatest pitch of stays 13½" at wide Water space 13" Working pressure of plate by rules 200 Lbs.Diameter of tubes 3¼" Pitch of tubes 4⅞" x 4⅞" Material of tube plates Steel Thickness: Front 1" Back 1⅞" Mean pitch of stays 8¾"Pitch across wide water spaces 13¾" x 13¾" Working pressures by rules 210 Lbs. Girders to Chamber tops: Material Steel Depth andthickness of girder at centre 10¾" + 13/16" (2) Length as per rule 34½" Distance apart 9⅞" Number and pitch of stays in each 3 @ 8½"Working pressure by rules 220 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 Schmidt Date of Approval of Plan ✓ Tested by Hydraulic Pressure to 600 Lbs.Date of Test 8-10-19 13-10-19 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler yesDiameter of Safety Valve 3" Pressure to which each is adjusted 205 Lbs. Is Easing Gear fitted no

W1435-0134



IS A DONKEY BOILER FITTED? Aux. Bhr. only If so, is a report now forwarded? yes

SPARE GEAR. State the articles supplied:—

2 Crosshead pin, bolts + nuts  
2 Crank-pin bolts + nuts  
2 Main bearing bolts + nuts  
1 Set coupling bolts + nuts  
1 Set feed + bilge pump valves  
1 Set packing rings + springs for each piston.  
Assorted bolts + nuts  
One Crank shaft (one section only)  
Propeller shaft + nut  
4 Cast iron Propeller blades  
1 Pair connecting rod brasses.

1 Pair Crosshead brasses  
1 Set Link brasses (liners for Quad blocks)  
Air pump rod + nut  
1 Eccentric strap complete.  
H.P. + L.P. Valve spindles  
1 Boiler check valves + seat.  
6 Cylinder cover studs + nuts  
6 Junk ring collar studs + nuts  
1 Valve chests cover studs + nuts

2 Dozen Boiler tubes (18 pl + 6 stay tubes).  
3 Doz. Condenser tubes + 12 ferr.  
1 Cylinder escape valve + spring  
1 Set safety valve springs.  
1 Set Weirs feed pump valves (S  
1 Set of Ballast pump valves (S  
For Windlass, steering Eng, Dynam  
Fan Eng, Circulating Pump Eng.  
each of these sizes of which.  
The following spares are supplied:  
1 Piston Rod complete. 1 con  
rod (ex. brasses) 1 Eccentric  
1 Eccentric strap complete  
main bearing studs + bolts

The foregoing is a correct description.

Kawasaki Dockyard Co., Ltd.

Per

Secretary.

Manufacturer.

1919  
Dates of Survey while building { During progress of work in shops -- May 1, 6, 10, 14, 19, 24, 26, 29; June 2, 6, 9, 10, 11, 19; July 8, 11, 24, 28; Aug. 2, 7, 11, 12, 16, 22, 26, 27, 28, 29;  
During erection on board vessel -- Sept. 2, 3, 5, 6, 8, 12, 15, 17, 29, 30; Oct. 4, 8, 9, 10, 13, 18, 20, 24, 29; Nov. 1, 3, 4, 7, 8, 10, 12, 15, 19, 22, 24, 29;  
Total No. of visits Dec. 1, 11. 61.

Is the approved plan of main boiler forwarded herewith yes

AUX.

Donkey

yes

Dates of Examination of principal parts—Cylinders 15-9-19 Slides 7-11-19 Covers 18-10-19 Pistons 18-10-19 Rods 3-11-19

Connecting rods 20-10-19 Crank shaft 15-9-19 Thrust shaft 15-9-19 Tunnel shafts 28-8-19 Screw shaft 6-9-19 Propeller 10-10-19

Stern tube 8-10-19 Steam pipes tested 15-10-19 Engine and boiler seatings 5-11-19 Engines holding down bolts 10-11-19

Completion of pumping arrangements 24-11-19 Boilers, fixed 22-11-19 Engines tried under steam 29-11-19

Completion of fitting sea connections 22-10-19 Stern tube 15-10-19 Screw shaft and propeller 21-10-19

Main boiler safety valves adjusted 22-11-19 Thickness of adjusting washers Locknuts Port F 9/16 Start F 9/16 AUXY F 9/16 A 3/4 A 5/8 A 9/16

Material of Crank shaft O.H. STEEL Identification Mark on Do. 15-9-19 W.L.R. Material of Thrust shaft O.H. STEEL Identification Mark on Do. 15-9-19 W.L.R.

Material of Tunnel shafts O.H. STEEL Identification Marks on Do. 15-9-19 W.L.R. Material of Screw shafts O.H. STEEL Identification Marks on Do. 15-9-19 W.L.R.

Material of Steam Pipes S.D. STEEL Test pressure 600 lbs. Spare — P 100 LLOYDS 22-11-19 W.L.R. Working — 600 lbs.

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 s/s. "War Queen" Rpt. No. 200

General Remarks (State quality of workmanship, opinions as to class, &c. s/s. "War Prince" " 203

s/s. "Naples Maru" " 258

s/s. "Port Said Maru" " 258

s/s. "Scotland Maru" " 263

s/s. "Italy Maru" " 263

s/s. "England Maru" " 266

s/s. "France Maru" " 264

The Machinery has been made and fitted under Special Survey

in accordance with the requirements of the Rules and the materials + workmanship

have been found good. The Machinery worked satisfactorily on trial

On the load trial with a draught forward of 20'-6" and aft. 22'-6" the speed

on the double run over 3 mile course were

1<sup>st</sup> with H.P. cut off = .65 = 11.48 knots mean R.p.m. = 66 J.H.P. = 2240

Steam H.P. 195 lbs., I.P. 60 lbs., L.P. 10 lbs., Vac. 28". Note Impulse valves sh

2<sup>nd</sup> with H.P. cut off = .74 = 12.58 knots mean. R.p.m. = 73 J.H.P. = 2946

Steam H.P. 196 lbs., I.P. 57.5 lbs., L.P. 8 lbs., Vac. 28". Note Impulse valves sh

The Machinery of this vessel is eligible in our opinion for the

notation ✕ L.M.C. 12-19. It is submitted that this vessel is eligible for

THE RECORD + L.M.C. 12-19. F.D. 12/10/20.

The amount of Entry Fee ... You 30.00

Special ... 735.00

Aux. Boiler Fee incl. 27.00

Travelling Expenses (if any) 27.00

Committee's Minute

Assigned + L.M.C. 12-19 F.D.



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