

REPORT ON MACHINERY.

No. 3052

Received at London Office

MON. 21 FEB. 1921

Date of writing Report Dec. 20th 1920 When handed in at Local Office

Port of *Uvaka*

Survey held at *Uvaka*

Date, First Survey *4 April*

Last Survey *7 Dec 1920*

on the *Single screw steamer Steamer Marie*

(Number of Visits *32*)

Tons } Gross *2568.12*
Net *1567.46*

Built at *Uvaka*

By whom built *The Uvaka Steam Works Ltd.*

When built *1920*

Engines made at *Uvaka*

By whom made *The Uvaka Steam Works Ltd.*

when made *1920*

Boilers made at *Uvaka*

By whom made *The Uvaka Steam Works Ltd.*

when made *1920*

Registered Horse Power

Owners *Uvaka Steam Works*

Port belonging to *Uvaka*

Net Horse Power as per Section 28 *288*

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 *31 35 58*

Length of Stroke *39*

Revs. per minute *80*

Dia. of Screw shaft

as per rule *12.02* Material of screw shaft } *Steel*
as fitted *12 1/2*

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

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

shafts are fitted, is the shaft lapped or protected between the liners *-*

Length of stern bush *4'-5"*

Dia. of Tunnel shaft as per rule *10.95*

Dia. of Crank shaft journals as per rule *11.5*

Dia. of Crank pin *11 1/2*

Size of Crank webs *x 7 1/2*

Dia. of thrust shaft under *23-22 1/2*

Length of Bars *12*

Dia. of screw *14'-3"*

Pitch of Screw *16'-6"*

No. of Blades *4*

State whether moveable *no*

Total surface *2000 sq ft*

No. of Feed pumps *2*

Diameter of ditto *3 1/2"*

Stroke *24"*

Can one be overhauled while the other is at work *yes*

No. of Bilge pumps *2*

Diameter of ditto *3 1/2"*

Stroke *24"*

Can one be overhauled while the other is at work *yes*

No. of Donkey Engines *3*

Sizes of Pumps *1 Indep. feed pump 6x8x20
1 Ballast pump 6x8x20
1 Gen. service pump 7x10x20*

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

Engine Room *2 wing at 3'*

1 center at 3 1/2'

In Holds, &c. *fore hold 2 at 3' cross bunker 2 at 3'*

after hold 2 at 3'

Stokehold *2*

3' in tunnel 1 at 2 1/2'

Is a separate Donkey Suction fitted in Engine room & size *yes 3 1/2"*

No. of Bilge Injections *1*

sizes *7"*

Connected to condenser, or to circulating pump *yes*

Are the roses in Engine room always accessible *yes*

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 *-*

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*

How are they protected *-*

Are all pipes carried through the bunkers *none*

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 *upper platform*

MILERS, &c.—(Letter for record *S*)

Manufacturers of Steel *Illinois Steel Co. Chicago.*

Total Heating Surface of Boilers *4046*

Is Forced Draft fitted *yes*

No. and Description of Boilers *2 Single ended Scotch*

Working Pressure *200 lbs*

Tested by hydraulic pressure to *400 lbs*

Date of test *5-10-1920*

No. of Certificate *100 lbs*

Can each boiler be worked separately *yes*

Area of fire grate in each boiler *49.5*

No. and Description of Safety Valves to each boiler *2 Spring loaded*

Smallest distance between boilers or uptakes and bunkers or woodwork *19"*

Mean dia. of boilers *13'-6"*

Length *12'-0"*

Material of shell plates *Steel*

Thickness *1 1/16"*

Range of tensile strength *21,791-20,000*

Are the shell plates welded or flanged *no*

Descrip. of riveting: cir. seams *Double*

Diameter of rivet holes in long. seams *1 7/16"*

Pitch of rivets *9 1/2"*

Top of plates or width of butt straps *1 1/2"*

Percentage of strength of longitudinal joint *95.09*

Working pressure of shell by rules *200 lbs*

Size of manhole in shell *12 x 16*

Size of compensating ring *34 x 38 x 1 1/2"*

No. and Description of Furnaces in each boiler *3 horizontal*

Material *Steel* Outside diameter *3'-4 1/2"*

Length of plain part *top 19 1/2"*

Thickness of plates *bottom 19 1/2"*

Description of longitudinal joint *Welded*

No. of strengthening rings *-*

Working pressure of furnace by the rules *224 lbs*

Combustion chamber plates: Material *Steel*

Thickness: Sides *1 1/16"*

Back *1 1/16"*

Top *1 1/16"*

Bottom *7/8"*

Working pressure by rules *211 lbs*

Pitch of stays to ditto: Sides *8 x 8 1/2"*

Back *8 1/2 x 8 1/2"*

Top *8 x 9 1/2"*

If stays are fitted with nuts or riveted heads *nuts*

Material of stays *Steel*

Area at smallest part *1.79*

Area supported by each stay *77.125*

Working pressure by rules *200 lbs*

End plates in steam space: Working pressure by rules *223 lbs*

Material of stays *Steel*

Area at smallest part *8.76*

Area supported by each stay *400*

Working pressure by rules *227 lbs*

Material of Front plates at bottom *Steel*

Thickness *7/8"*

Material of Lower back plate *Steel*

Thickness *7/8"*

Greatest pitch of stays *16 1/2 x 8 1/2"*

Working pressure of plate by rules *209 lbs*

Diameter of tubes *3"*

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

Material of tube plates *Steel*

Thickness: Front *7/8"*

Back *1 1/16"* Mean pitch of stays *6' 2 1/2 x 13 1/2"*

Pitch across wide water spaces *14"*

Working pressures by rules *225 lbs*

Girders to Chamber tops: Material *Steel*

Depth and thickness of girder at centre *9 1/2 x 1 1/2"*

Length as per rule *2'-8 1/2"*

Distance apart *9 1/2"*

Number and pitch of stays in each *3 at 8"*

% of strength of joint *-*

Working pressure by rules *227 lbs*

Steam dome: description of joint to shell *-*

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 *-*

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 *-*

Is Easing Gear fitted *-*

Diameter of Safety Valve *-*

Pressure to which each is adjusted *-*

2020

Lloyd's Register

IS A DONKEY BOILER FITTED? no

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Solid cast iron propeller. 1 propeller shaft with nut. 1 set of coupling bolts. 1 set main bearing bolts. 1 set connecting rod top end bolts and 1 set bottom end. Air pump rod and set of air pump valves. Set of valves and seats for feed pumps & set for bilge pumps. Main and donkey check valves and seats. 2 safety valve springs for boilers. Set of connecting rod braces for top & bottom ends. 12 jointing bolts. Set of piston rings for H.P., M.P. & L.P. 33 Condenser tubes & 100 ferrules. Spring for each side of relief valve on main engine & pumps.
A quantity of assorted bolts, nuts, bars and steel plates.

The foregoing is a correct description,

G. Yemm



Dates of Survey while building: During progress of work in shops -- 1920 April 4, 6, 9, 16, 20, June 1, August 4, 10, 12, 16, 20, 28 Sept. 2, 6, 9, 16, 21, 24, 28, Oct. 6, 11, 15. During erection on board vessel --- October 29, November 3, 8, 12, 16, 22, 26, 30 December 3, 7. Total No. of visits 32. Is the approved plan of main boiler forwarded herewith yes.

Dates of Examination of principal parts—Cylinders 12-8-20 Slides 6-10-20 Covers 12-9-20 Pistons 6-10-20 Rods 6-10-20 Connecting rods 6-10-20 Crank shaft 4-8-20 Thrust shaft 1-6-20 Tunnel shafts 9-4-20, 16-4-20, 4-5-20 Screw shaft 6-4-20 Propeller 28-9-20 Stern tube 28-8-20 Steam pipes tested 12-11-20 Engine and boiler seatings 3-11-20 Engines holding down bolts 3-11-20 Completion of pumping arrangements 26-11-20 Boilers fixed 3-11-20 Engines tried under steam 1-12-20, 3-12-20 Completion of fitting sea connections 20-10-20 Stern tube 11-10-20 Screw shaft and propeller 15-10-20 Main boiler safety valves adjusted 22-11-20 Thickness of adjusting washers Lock rule. Material of Crank shaft Steel Identification Mark on Do. 4-5-20 Material of Thrust shaft Steel Identification Mark on Do. 931671, 1-6-20, 7.0. Material of Tunnel shafts Steel Identification Marks on Do. In helms Material of Screw shafts Steel Identification Marks on Do. 8140522, 6-4-20, 7.0. Material of Steam Pipes Solid drawn copper Test pressure 400 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 Hukukon Maru General Remarks (State quality of workmanship, opinions as to class, &c.)

The crank, thrust, tunnel and tail shafts were forged and finished at Sumitomo Steel Works. The tunnel shafts are marked as follows 81527 1/2, 81524 1/2, 81536 1/2, 9278 1/2, 9432 1/2. 16-4-20, 16-4-20, 16-4-20, 9-4-20, 4-5-20. Y.D. R.

The Engines and Boilers were built under special survey in accordance with the requirements of the Rules and the materials and workmanship has been found good.

This vessel in my opinion is eligible to the Record + L.M.E. 12-20

It is submitted that this vessel is eligible for THE RECORD + L.M.E. 12. 20. FD.

Reed. 23/2/21

W. Lawson. Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee Year 30. - : When applied for, Special ... £ 602. - : Dec. 8th 1920 Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) £ : : Dec. 14th 1920

Committee's Minute FRI. 25 FEB. 1921 Assigned to L.M.C 12, 20

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

CERTIFICATE WRITTEN



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