

REPORT ON MACHINERY.

Received at London Office

Date of writing Report

19

When handed in at Local Office

23/6/17 Port of Hull

No. in Survey held at Reg. Book.

Hull

Date, First Survey

17.7.16

Last Survey

22.6.1917

(Number of Visits 57)

Sept 21 on the steel screw trawler Tamura

Tons } Gross 268
Net 111
When built 1917-6

Master

Built at Lelby

By whom built Cochrane & Sons Ltd

Engines made at Hull

Hull

By whom made

C. D. Holmes & Co Ltd 7 12 1130

when made 1917-6

Boilers made at Hull

Hull

By whom made

C. D. Holmes & Co Ltd 7 12 1130

when made 1917-6

Registered Horse Power

Owners Teale & West Ltd

Port belonging to Cardiff

Nom. Horse Power as per Section 28 85

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 12 1/2 - 21 - 35 Length of Stroke 26 Revs. per minute

Dia. of Screw shaft as per rule 7.46 Material of screw shaft as fitted 7 1/8 Dia. of thrust shaft under collars 7 1/8

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 yes 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 Length of stern bush 35 1/2

Dia. of Tunnel shaft as per rule 6.57 Dia. of Crank shaft journals as per rule 6.89 Dia. of Crank pin 7 1/8 Size of Crank webs 3 1/2 x 4 1/2 Dia. of thrust shaft under collars 7 1/8 Dia. of screw 9-3 Pitch of Screw 10-9 No. of Blades 4 State whether moveable no Total surface 32 1/2

No. of Feed pumps one Diameter of ditto 2 1/2 Stroke 14 3/4 Can one be overhauled while the other is at work yes No. of Bilge pumps one Diameter of ditto 2 1/2 Stroke 14 3/4 Can one be overhauled while the other is at work yes

No. of Donkey Engines one Sizes of Pumps 6, 3 1/2 x 6, 4 1/2 wheel No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room two 2" dia In Holds, &c. one 2" dia in each compartment

No. of Bilge Injections one sizes 3 1/2 Connected to condenser, or to circulating pump pumps Is a separate Donkey Suction fitted in Engine room & size 2 1/2 gals.

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 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 Forward suction How are they protected strong wooden casings

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 worked from Stewart & Lloyd's

BOILERS, &c.—(Letter for record S) Manufacturers of Steel

Total Heating Surface of Boilers 1530 Is Forced Draft fitted no No. and Description of Boilers one single ended Working Pressure 180 lbs Tested by hydraulic pressure to 300 lbs Date of test 25-1-17 No. of Certificate 3187

Can each boiler be worked separately yes Area of fire grate in each boiler 50.54 ft No. and Description of Safety Valves to each boiler two spring loaded Area of each valve 4.9 Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yes

Smallest distance between boilers 8" bolu lagged dia. of boilers 162 Length 10-6 Material of shell plates steel Thickness 1 1/8 Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double long. seams J.P.D.B.P. Diameter of rivet holes in long. seams 1 1/8 Pitch of rivets 7 3/8 Lap of plates or width of butt straps 16 1/2

Per centages of strength of longitudinal joint rivets 88.7 Working pressure of shell by rules 184 Size of manhole in shell 16 x 12 Size of compensating ring 7 x 1 1/8 No. and Description of Furnaces in each boiler three plain Material steel Outside diameter 42

Length of plain part top 8.1 bottom 7 3/2 Thickness of plates crown 2 2/32 Description of longitudinal joint welded No. of strengthening rings one per pitch Working pressure of furnace by the rules 187 Combustion chamber plates: Material steel Thickness: Sides 23/32 Back 23/32 Top 3/16 23/32 Bottom 23/32

Pitch of stays to ditto: Sides 10 x 9 Back 10 1/8 x 8 1/2 Top 10 1/2 x 8 1/2 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 191 Material of stays steel Area at smallest part 2.07 Area supported by each stay 90 Working pressure by rules 207 End plates in steam space: Material steel Thickness 1 3/32 Pitch of stays 18 x 17 How are stays secured J.P.D.B.P. Working pressure by rules 185 Material of stays steel

Area at smallest part 7.5 Area supported by each stay 306 Working pressure by rules 255 Material of Front plates at bottom steel Thickness 7/8 Material of Lower back plate steel Thickness 7/8 3 doubling plates Greatest pitch of stays 14 x 8 1/2 Working pressure of plate by rules 197

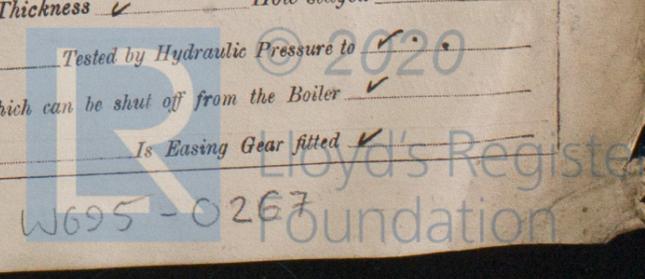
Diameter of tubes 3 1/2 Pitch of tubes 5 x 4 3/4 Material of tube plates steel Thickness: Front 7/8 + 3/16 Back 7/8 Mean pitch of stays 11 Pitch across wide water spaces 13 3/4 Working pressures by rules 226 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 10 x 1 3/4 Length as per rule 34.65 Distance apart 14 1/2, 10 1/2 Number and pitch of stays in each three 8

Working pressure by rules 9 1/2 + 1 3/4 Steam dome: description of joint to shell Diam. of rivet holes Diameter Thickness of shell plates Material Description of longitudinal joint How stayed Pitch of rivets Working pressure of shell by rules Crown plates Thickness

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 Is Easing Gear fitted

Date of Test Diameter of Safety Valve Pressure to which each is adjusted

If not, state whether, and when, one will be sent. Is a Report also sent on the Hull of the ship?



IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Two top end bolts & nuts, two bottom end bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set of air, feed & bilge pump valves, one main & one donkey check valve seat, two donkey pump valves, 6 junk ring studs & nuts, one safety valve spring, one escape valve spring each size, 6 screwed stays & a quantity of bolts & nuts of various sizes.

The foregoing is a correct description,
p. pro CHARLES D. HOLMES & Co., Ltd.

Charles D. Holmes DIRECTOR Manufacturer.

Dates of Survey while building { During progress of work in shops -- } 1916: July 7, 10, 21, 24, 28, 31 Aug 4, 3, 7, 15, 19, 23, 28, 31 Nov 7, 9, 21, 24, 28 Dec 5, 9
{ During erection on board vessel -- } 14, 19, 21, 29 1917: Jan 4, 5, 9, 10, 12, 16, 18, 23, 25, 28 Apr 2, 5, 11, 13, 18, 23, 24, 26, 27
Total No. of visits } May 4, 8, 10, 17, 21, 24, 27 Jun 6, 7, 11, 13, 14, 22
Is the approved plan of main boiler forwarded herewith *Yes*

Dates of Examination of principal parts—Cylinders 2-4-17 Slides 8-5-17 Covers 24-4-17 Pistons 24-4-17 Rods 5-4-17
Connecting rods 5-4-17 Crank shaft 18-4-17 Thrust shaft 28-8-16 Tunnel shafts ✓ Screw shaft 3-8-16 Propeller 3-8-16
Stern tube 31-7-16 Steam pipes tested 17-5-17 Engine and boiler seatings 7-8-16 Engines holding down bolts 21-5-17
Completion of pumping arrangements 7-6-17 Boilers fixed 24-5-17 Engines tried under steam 11-6-17
Completion of fitting sea connections 7-8-16 Stern tube 7-8-16 Screw shaft and propeller 15-8-16
Main boiler safety valves adjusted 7-6-17 Thickness of adjusting washers $7\frac{1}{16}$ & $5\frac{3}{32}$ "
Material of Crank shaft *Iron* Identification Mark on Do. 1773 FLS Material of Thrust shaft *Iron* Identification Mark on Do. 1722 FLS
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *Iron* Identification Marks on Do. 1711 FLS
Material of Steam Pipes *Solid drawn copper* Test pressure 40 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 *Kurishi*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel has been constructed under special survey in accordance with the approved plan & the rules of this Society the materials & workmanship are good, the boiler & steam pipes have been tested by hydraulic pressure as above & found sound & good. The machinery has been properly fitted & secured on board the vessel on completion was tried under steam at full power & found satisfactory, the safety valves have been adjusted under steam & tested for accumulation which did not exceed 195 lbs.
In my opinion the vessel is eligible for the record + L.M.C.G. 17*

It is submitted that
this vessel is eligible for
THE RECORD + L.M.C.G. 17.

J.W.D.
25/6/17

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

The amount of Entry Fee ...	£ 1 : 0 :	When applied for,
Special ...	£ 12 : 15 :	23/6/1917
Donkey Boiler Fee ...	£ : :	When received,
Travelling Expenses (if any) £	: 8/2 :	29/6/19

Frank L. Sturgeon
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
Assigned
+ *LMC 6.17*
TUE. 20 JUN 1917

MACHINERY CERTIFICATE
WRITTEN