pt. 4.

REPORT ON MACHINERY.

No. 29933

Received at London Office FRI 11 MAY 1917

te of writing Report 5-5-17 19 When handed in at Local Office 9-5-17 19 Port of Hull

. in Survey held at Hull Date, First Survey Mar 8/16 Last Survey 2-5-17 19 (Number of Visits)

eg. Book. 17 on the Steel screw trawler Kunishi Tons Gross 268 Net 111

aster Built at Selby By whom built Cochrane & Sons Ltd When built 1917-5

ngines made at Hull By whom made C.D. Holmes & Co Ltd } 201129 when made 1917-5

oilers made at Hull By whom made C.D. Holmes & Co Ltd when made 1917-5

egistered Horse Power Owners Neale & West Ltd Port belonging to Cardiff

om. Horse Power as per Section 28 85 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

NGINES, &c.—Description of Engines Triple expansion No. of Cylinders Three No. of Cranks 3

ia. of Cylinders 12½" - 21" - 35" Length of Stroke 26" Revs. per minute 108 Dia. of Screw shaft as per rule 7'4.6" as fitted 7 3/8" Material of screw shaft Iron

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 yes If the liner does not fit tightly at the part

etween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive If two

iners are fitted, is the shaft lapped or protected between the liners Length of stern bush 35½"

Dia. of Tunnel shaft as per rule 6'.57 as fitted Dia. of Crank shaft journals as per rule 6'.89 as fitted 7⅜" Dia. of Crank pin 7⅜" Size of Crank webs 13½" × 4 7/8" Dia. of thrust shaft under

ollars 7⅜" Dia. of screw 9'-3" Pitch of Screw 10'-9" No. of Blades 4 State whether moveable no Total surface 32½ ☐"

No. of Feed pumps one Diameter of ditto 2½" Stroke 14¾" Can one be overhauled while the other is at work 67.4 ESD

No. of Bilge pumps one Diameter of ditto 2½" Stroke 14¾" Can one be overhauled while the other is at work

No. of Donkey Engines one + 2½" ejector Sizes of Pumps 6", 3½" × 6" Flywheel 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 3½" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 2½" ejector

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 Fwd and aft suctions 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 Is it fitted with a watertight door worked from

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

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 360 lbs Date of test 5-1-17 No. of Certificate 3185

Can each boiler be worked separately Area of fire grate in each boiler 50.5 ☐' 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 ~~or uptakes~~ and bunkers ~~or woodwork~~ 7" boiler lagged Mean dia. of boilers 162" Length 10'-6" Material of shell plates Steel

Thickness 1⅛" Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double

long. seams T.R.B.I Diameter of rivet holes in long. seams 1⅛" Pitch of rivets 7 3/8" ~~Lap of plates or~~ width of butt straps 16½"

Per centages of strength of longitudinal joint rivets 88.7 plate 84.7 Working pressure of shell by rules 184 Size of manhole in shell 16" × 12"

Size of compensating ring 7" × 1⅛" No. and Description of Furnaces in each boiler Three plain Material steel Outside diameter 42"

Length of plain part top 81" bottom 73½" Thickness of plates crown 25/32" bottom 25/32" Description of longitudinal joint welded No. of strengthening rings nil

Working pressure of furnace by the rules 187 Combustion chamber plates: Material steel Thickness: Sides 23/32" Back 23/32" Top ¾ thick 23/32" Bottom 23/32"

Pitch of stays to ditto: Sides 10" × 9" Back 10 15/16" × 8¼" 11½ × 8 thick Top 10½ × 8 thick 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" × 17" How are stays secured D.h.n.w. 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" double plates Greatest pitch of stays 14" × 8½" Working pressure of plate by rules 197

Diameter of tubes 3½" Pitch of tubes 5" × 4¾" Material of tube plates steel Thickness: Front 7/8" + ¾ dbls Back 7/8" Mean pitch of stays 11"

Pitch across wide water spaces 13¾" Working pressures by rules 226 Girders to Chamber tops: Material steel Depth and

thickness of girder at centre 10" × 1¾ 6 thick Length as per rule 34.65 Distance apart 11½ & 10½ thick Number and pitch of stays in each Three 8"

Working pressure by rules 180 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 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

ameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

009200 - 009210 - 0081

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, fuel bilge pump valves, one main & one donkey check valve seat, two donkey pump valves, 6 screwed stays, 6 gunk ring studs & nuts, one safety valve spring one steps valve spring each size & quantity of bolts & nuts each of various sizes

The foregoing is a correct description,

p pro CHARLES D. HOLMES & CO. LTD.
Arthur Holmes DIRECTOR
Manufacturer.

Dates of Survey while building
- During progress of work in shops — 1916:- Mar 8 10 Jul 7 10. 14. 28. 31. Aug 1. Nov 7. 13. 15. 16. 21. 24. 28 Dec 1. 5. 9. 14. 19. 21
- During erection on board vessel — 29 1917: Jan 4. 5. Feb 19. 23. Mar 14. 15. 16. 19. 21. 27. Apr 2, 3. 5. 11. 16. 18. 20. 24. 25. 28. May 1. 2. 3.
- Total No. of visits 45

Is the approved plan of main boiler forwarded herewith Yes ✓ please return for Derby vessel
" " " donkey " " "

Dates of Examination of principal parts— Cylinders 15-11-16 Slides 2-4-17 Covers 27-3-17 Pistons 27-3-17 Rods 27-3-17
Connecting rods 19-2-17 Crank shaft 21-3-17 Thrust shaft 14-7-16 Tunnel shafts ✓ Screw shaft 31-7-16 Propeller 31-7-16
Stern tube 28-7-16 Steam pipes tested 18-4-17 Engine and boiler seatings 1-8-16 Engines holding down bolts 16-4-17
Completion of pumping arrangements 25-4-17 Boilers fixed 16-4-17 Engines tried under steam 2-5-17
Completion of fitting sea connections 1-8-16 Stern tube 1-8-16 Screw shaft and propeller 1-8-16
Main boiler safety valves adjusted 25-4-17 Thickness of adjusting washers 7 3/8 & 3/8
Material of Crank shaft Iron Identification Mark on Do. 1763 FLS Material of Thrust shaft Iron Identification Mark on Do. 1705 FLS
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Iron Identification Marks on Do. 1701 FLS
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 no ✓ If so, state name of vessel ✓

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 plans the rules of this society the materials workmanship are good The boiler steam pipes have been tested as above found sound tight. The machinery has been properly fitted secured on board the vessel & on completion was tried under full working conditions found satisfactory The safety valves have been adjusted under steam tested for accumulation which did not exceed 192 lbs.
In my opinion the vessel is eligible for the record + L. M. C. 5-17

Kirk

It is submitted that this vessel is eligible for THE RECORD. + LMC 5.17.
JWR. 11/5/17
AWK

Certificate (if required) to be sent to

The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee	...	£ 1	: 0	:
Special SW	...	£ 12	: 15	:
Donkey Boiler Fee	...	£	:	:
Travelling Expenses (if any)		£	: 8/2	:

When applied for, 10/5/1917
When received, 31/5/17 1/6/17

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

Committee's Minute TUE 15 MAY 1917
Assigned + L.M.C. 5.17

MACHINERY CERTIFICATE WRITTEN.