

REPORT ON MACHINERY.

No. 6398.

WED. 4 DEC 1907

Port of Belfast

Received at London Office

No. in Survey held at Belfast

Date, first Survey 15 March Last Survey 26 Nov 1907

Reg. Book.

(Number of Visits 45)

on the U.S.S. Kiska

Gross 6558

Master J. Chaddy

Built at Belfast

By whom built Warkman Clark & Co. Ltd. When built 1907

Net 4168

Engines made at Belfast

By whom made

when made

Boilers made at

By whom made

when made

Registered Horse Power 810

Owned Shaw Savill & Albion Co. Ltd. Port belonging to Southampton

Nom. Horse Power as per Section 28 810

Is Refrigerating Machinery fitted for cargo purposes Yes

Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Twin Screw Triple Expansion of Cylinders 6 No. of Cranks 6

Dia. of Cylinders 22-37-63 Length of Stroke 48 Revs. per minute 78 Dia. of Screw shaft 13.7 Material of screw shaft Steel

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 Yes Length of stern bush 4'-10"

Dia. of Tunnel shaft 12.5 Dia. of Crank shaft journals 12.9 Dia. of Crank pin 13.4 Size of Crank webs 24 1/2 x 9 1/2 Dia. of thrust shaft under

collars 14 Dia. of screw 15.9 Pitch of Screw 19'-6" No. of Blades 3 State whether moveable Yes Total surface 652 sq ft.

No. of Feed pumps 1 Diameter of ditto 5 1/2 Stroke 24 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 1 Diameter of ditto 5 1/2 Stroke 24 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 7 Sizes of Pumps 12 x 9 x 24 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 4-3 1/2 10 x 12 x 12 In Holds, &c. 11-3 1/2 + 2-2 1/2

No. of Bilge Injections 2 sizes 8 Connected to condenser, or to circulating pump Yes Pumps a separate Donkey Suction fitted in Engine room & size 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 Yes

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 Both

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 Five Lull suction How are they protected Wood 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

Dates of examination of completion of fitting of Sea Connections 10-9-07 of Stern Tube 15-9-07 Screw shaft and Propeller 15-9-07

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Upper Deck

MILERS, &c.—(Letter for record S) Manufacturers of Steel Glasgow S.W. Coy. Ltd. & Steel Coy. Scot.

Total Heating Surface of Boilers 11750 sq ft. Forced Draft fitted Yes No. and Description of Boilers 5 Single End Cylind.

Working Pressure 205 lbs Tested by hydraulic pressure to 410 lbs Date of test 24-9-07 No. of Certificate 405

Can each boiler be worked separately Yes Area of fire grate in each boiler 57 1/2 sq ft. No. and Description of Safety Valves to

each boiler 2-1/2 inch Spring Area of each valve 9.62 sq in 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 20 Mean dia. of boilers 14'-6" Length 11'-6" 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. seam Lap Rivt.

Long. seams Butt Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 10 Top of plates or width of butt straps 22 1/2

Percentage of strength of longitudinal joint 87.7 Working pressure of shell by rules 240 lbs Size of manhole in shell 16" x 12"

Size of compensating ring Mr. Keils No. and Description of Furnaces in each boiler 3-Marrison Material Steel Outside diameter 46 1/2

Length of plain part 5 Thickness of plates 3 1/2 Description of longitudinal joint Weld No. of strengthening rings 0

Working pressure of furnace by the rules 235 lbs Combustion chamber plates: Material Steel Thickness: Sides 4 1/2 Back 4 Top 4 1/2 Bottom 1

Number of stays to ditto: Sides 8 1/2 x 7 1/2 Back 3 x 8 1/2 Top 8 1/2 x 7 1/2 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 215 lbs

Material of stays Steel Diameter at smallest part 1 1/2 Area supported by each stay 70 1/2 Working pressure by rules 262 lbs End plates in steam space:

Material Steel Thickness 1 1/4 Pitch of stays 2 1/2 x 1 1/2 How are stays secured Nuts & Washers Working pressure by rules 208 lbs Material of stay Steel

Diameter at smallest part 2 1/2 Area supported by each stay 35 1/2 Working pressure by rules 247 lbs Material of Front plates at bottom Steel

Thickness 1 Material of Lower back plate Steel Thickness 3/8 Greatest pitch of stays 13 1/2 Working pressure of plate by rules 276 lbs

Diameter of tubes 2 1/2 Pitch of tubes 3 1/2 x 3 1/2 Material of tube plates Steel Thickness: Front 1 Back 1 1/2 Mean pitch of stays 1 1/2 x 1 1/2

Which cross wide water spaces 13 1/2 Working pressures by rules 208 lbs Girders to Chamber tops: Material Steel Depth and

Thickness of girder at centre 8 1/2 x 2 Length as per rule 30 Distance apart 8 1/2 x 7 1/2 Number and pitch of stays in each 2-8 1/2

Working pressure by rules 209 lbs Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

separately Yes Diameter 18 Length 18 Thickness of shell plates 3/8 Material Steel Description of longitudinal joint Weld Diam. of rivet

1 1/2 Pitch of rivets 10 Working pressure of shell by rules 240 lbs Diameter of flue 18 Material of flue plates Steel Thickness 3/8

Strengthened with rings Yes Distance between rings 18 Working pressure by rules 208 lbs End plates: Thickness 1 1/2 How stayed Weld

Working pressure of end plates 209 lbs Area of safety valves to superheater 18 Are they fitted with easing gear Yes

Lloyd's Register Foundation

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. _____ Description _____ When made _____ Where fixed _____
 Made at _____ By whom made _____
 Working pressure _____ tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Stays _____
 Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____
 If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____ Dia. of donkey boiler _____ Length _____
 Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long. seams _____ Rivets _____ Plates _____
 Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____
 Working pressure of shell by rules _____ Thickness of shell crown plates _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____
 Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____
 Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Stayed by _____
 Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— 5 Crank Shafts, 1 Spruce Shaft, 1 Propeller Shaft, 2 Propeller Walses, Pair Cross-head Brasses, Pair Crank pin Brasses, H.P. and M.P. Complete, 2 sets M.P. packing rings, 2 sets L.P. packing rings, H.P. and M.P. Piston valve complete, Piston rod nuts, Chromite Rod. Strap pulley, Slide valve spindle, Air pump bucket, Job. & back valve, 1 Forge Draft Fan, 2 sets of 2 Drifts Rules, 1 set of 2 Drifts Rules.

The foregoing is a correct description,
 FOR WORKMAN, CLARK & CO., LIMITED.
 M.H. Bell. Manufacturer.

Dates of Survey while building	During progress of work in shops—	1907, March 15, 21, 26.	April 5, 11, 12, 16, 19, 29.	May 9, 14, 17, 22, 28	June 1, 8, 15, 22, 29
	During erection on board vessel—	19, 24, July 2, 6, 9, 24, 31.	Aug. 3, 8, 23.	Sep. 4, 6, 9, 10, 12, 24, 26	update Nov 1907
	Total No. of visits	45			

Dates of Examination of principal parts—	Cylinders	12 Slides	4 - 0 1/2 Covers	" donkey "	" "	" "	Rods 24 - 9 - 0
Connecting rods	4 - 10 - 0 1/2	Crank shaft	29 - 2 Thrust shaft	Tunnel shafts	Soft shaft	10 - 9 - 0 1/2	Propeller 9 - 9 - 0
Stern tube	9 - 9 - 0 1/2	Steam pipes tested	16 - 9 - 0 1/2	Engines and boiler seatings	18 - 10 - 0 1/2	Engines holding down bolts	14 - 10 - 0
Completion of pumping arrangements	25 - 16 - 0 1/2	Boilers fixed	23 - 10 - 0 1/2	Engines tried under steam	18 - 11 - 0 1/2		
Main boiler safety valves adjusted	13 - 11 - 0 1/2	Thickness of adjusting washers	32				
Material of Crank shaft	S. Steel	Identification Mark on Do.	4-9-07	Material of Thrust shaft	do	Identification Mark on Do.	do
Material of Tunnel shafts	do	Identification Marks on Do.	do	Material of Screw shafts	do	Identification Marks on Do.	do
Material of Steam Pipes	M. Iron			Test pressure	615 lbs per sq. in.		

General Remarks (State quality of workmanship, opinions as to class, &c.)
 The machinery of this vessel has been constructed under Special Survey, and in accordance with the Rules. The workman ship, and the materials are of good description, and an trial under steam in Belfast Lough, the machinery worked satisfactorily.

In my opinion, it is eligible to have record + L.M.C. 11-07 with notification "Forced Draft", Electric Light, Refrigerating Machinery.

It is submitted that this vessel is eligible for THE RECORD. L.M.C. 11.07 ELEC LIGHT F.D. REF. MCH.

The amount of Entry Fee..	£ 3 : 0 :	When applied for,	2-12-07
Special	£ 60 : 10 :	When received,	27-12-07
Donkey Boiler Fee .. .	£ :		
Travelling Expenses (if any) £	:		

Committee's Minute Assigned

FRI. 6 DEC 1907

R. J. Pennington
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



MACHINERY CERTIFICATE WRITTEN.
 Lloyd's Register Foundation

Certificate (if required) to be sent to Committee's Minutes.

Form No. 1B.
 Boats Pump Windl Engin
 What Coal l Numbe Ceilin Cargo State s Numbe and Bulw The a Builde

These Signal I
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