

REPORT ON MACHINERY.

No. 15,523.

Port of Leith

Received at London Office 16 JAN 1919

No. in Survey held at Alloa Date, first Survey 21/3/18 Last Survey 17/12/18
Reg. Book. SS. Catherine Aida (Number of Visits 21)

Master Alloa Built at Alloa By whom built J. S. + G. O'Neil (Jefferies yard) Tons }
Engines made at Alloa By whom made John S. B. R. O'Neil (Jefferies yard) When built 1918 Net }
Boilers made at Glasgow By whom made D. Roman + G. O'Neil when made 1918
Registered Horse Power 127 Owners J. Keefe + Son Port belonging to London

Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Triple Inverted No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 16. 7 1/2. 4 1/4 Length of Stroke 30 Revs. per minute 90 Dia. of Screw shaft as per rule 9.2 Material of screw shaft I
as fitted 9.1/4

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 no 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 no If two

liners are fitted, is the shaft lapped or protected between the liners no Length of stern bush 43 3/4

Dia. of Tunnel shaft as per rule 8.05 Dia. of Crank shaft journals as per rule 8.45 Dia. of Crank pin 8 3/4 Size of Crank webs 17x6 Dia. of thrust shaft under

collars 8 1/2 Dia. of screw 11-6 Pitch of Screw 12-6 No. of Blades 4 State whether moveable no Total surface 450

No. of Feed pumps 2 Diameter of ditto 3 Stroke 15 Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 3 1/4 Stroke 15 Can one be overhauled while the other is at work yes

No. of Donkey Engines 2 Sizes of Pumps 6" x 4 1/2 x 6" 7" x 7 x 8" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 3 9/3" + 2 1/2" In Holds, &c. 2 in mainhold 2 1/2"

No. of Bilge Injections 1 sizes 4" Connected to condenser, or to circulating pump no Is a separate Donkey Suction fitted in Engine room & size yes, 3"

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 no

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 none How are they protected no

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 24/9/18 of Stern Tube 24/9/18 Screw shaft and Propeller 24/9/18

Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door no worked from no

OILERS, &c.—(Letter for record no) Manufacturers of Steel no

Total Heating Surface of Boilers no Is Forced Draft fitted no No. and Description of Boilers no

Working Pressure no Tested by hydraulic pressure to no Date of test no No. of Certificate no

Can each boiler be worked separately no Area of fire grate in each boiler no No. and Description of Safety Valves to

each boiler no Area of each valve no Pressure to which they are adjusted no Are they fitted with easing gear no

Smallest distance between boilers or uptakes and bunkers or woodwork no Mean dia. of boilers no Length no Material of shell plates no

Thickness no Range of tensile strength no Are the shell plates welded or flanged no Descrip. of riveting: cir. seams no

long. seams no Diameter of rivet holes in long. seams no Pitch of rivets no Lap of plates or width of butt straps no

Per centages of strength of longitudinal joint no Working pressure of shell by rules no Size of manhole in shell no

Size of compensating ring no No. and Description of Furnaces in each boiler no Material no Outside diameter no

Length of plain part no Thickness of plates no Description of longitudinal joint no No. of strengthening rings no

Working pressure of furnace by the rules no Combustion chamber plates: Material no Thickness: Sides no Back no Top no Bottom no

Pitch of stays to ditto: Sides no Back no Top no If stays are fitted with nuts or riveted heads no Working pressure by rules no

Material of stays no Diameter at smallest part no Area supported by each stay no Working pressure by rules no End plates in steam space: no

Material no Thickness no Pitch of stays no How are stays secured no Working pressure by rules no Material of stays no

Diameter at smallest part no Area supported by each stay no Working pressure by rules no Material of Front plates at bottom no

Thickness no Material of Lower back plate no Thickness no Greatest pitch of stays no Working pressure of plate by rules no

Diameter of tubes no Pitch of tubes no Material of tube plates no Thickness: Front no Back no Mean pitch of stays no

Pitch across wide water spaces no Working pressures by rules no Girders to Chamber tops: Material no Depth and no

Thickness of girder at centre no Length as per rule no Distance apart no Number and pitch of stays in each no

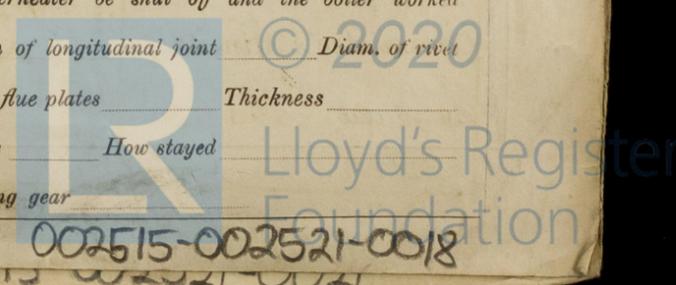
Working pressure by rules no Superheater or Steam chest; how connected to boiler no Can the superheater be shut off and the boiler worked no

separately no Diameter no Length no Thickness of shell plates no Material no Description of longitudinal joint no Diam. of rivet no

Material no Pitch of rivets no Working pressure of shell by rules no Diameter of flue no Material of flue plates no Thickness no

stiffened with rings no Distance between rings no Working pressure by rules no End plates: Thickness no How stayed no

Working pressure of end plates no Area of safety valves to superheater no Are they fitted with easing gear no



002515-002521-0018

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. _____ Description _____

Made at _____ By whom made _____ When made _____ Where fixed _____

Working pressure tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safety 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 _____

Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Plates _____

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:—

Two top and bottom end connecting rod bolts nuts; two main bearing bolts nuts, one set of coupling bolts nuts, one set of feed valve pump valves, assorted bolts nuts, turn of various sizes.

The foregoing is a correct description,

Manufacturer.

FOR THE SHIPBUILDING & ENGINEERING CO. (JEFFREY'S YARD)

ROD J. JEFFREY & CO.

Dates of Survey while building	During progress of work in shops - -	1918	Mar 21	Apr 5	10-22	May 15	28	June 10	17-28	July 19	31	Aug 19	Sep 4	11-24	Oct 15	
		During erection on board vessel - -	Oct 25	Nov 15	Dec 13	17										
			Total No. of visits	21												

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—	Cylinders	14/9/18	Slides	4/9/18	Covers	4/9/18	Pistons	24/9/18	Rods	31/7/18	
Connecting rods	28/6/18	Crank shaft	25/4	Thrust shaft	1/10/18	Tunnel shafts	✓	Screw shaft	21/2/18	Propeller	31/7/18
Stern tube	31/7/18	Steam pipes tested	at 9lb.	Engine and boiler seatings	24/9/18	Engines holding down bolts				13/12/18	
Completion of pumping arrangements	17/12/18	Boilers fixed	13/12/18	Engines tried under steam	17/12/18						
Main boiler safety valves adjusted	13/12/18	Thickness of adjusting washers	Pop 3/8	S 3/8 B	S 5/16 F	S 3/8					
Material of Crank shaft	S	Identification Mark on Do.	LLOYD'S 4644 cm.	Material of Thrust shaft	S	Identification Mark on Do.	LLOYD'S 4644 J.R.W. cm.				
Material of Tunnel shafts	✓	Identification Marks on Do.	✓	Material of Screw shafts	I	Identification Marks on Do.	LLOYD'S 4644 cm.				
Material of Steam Pipes	Steel	Test pressure	5740 lb.								

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery of this vessel has been built under special survey the material & workmanship are good, and in my opinion the vessel is eligible for record of + LMC 12-18.

It is submitted that this vessel is eligible for THE RECORD + LMC 12-18.

J.W.D. 17/11/19
J.R.W.

Chambers

The amount of Entry Fee..	£	:	:	When applied for,
Special for Engrs & getting on board	£	12	7	1919
Donkey Boiler Fee	£	:	:	When received,
Travelling Expenses (if any)	£	:	:	11.6. 1919

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

Committee's Minute

Assigned

+ LMC 12-18

TUE. JAN. 21. 1919

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

MACHINERY CERTIFICATE
WRITTEN



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Foundation