

REPORT ON MACHINERY

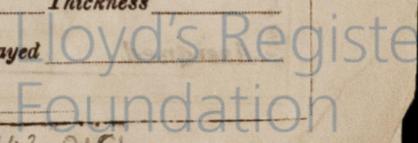
No. 75604

Received at London Office MAY 5 - 1913

Date of writing Report 19 When handed in at Local Office 10 Port of London
 No. in Survey held at Luton Date, First Survey 1st Nov. 1912 Last Survey 10th April 1913
 Reg. Book. 101 on the *Expans 8° 1903 for 5/8 229 Stug Englishman* (Number of Visits 5) Gross 27/13
 Master Built at *Hessle* By whom built *Henry Scarr* Tons Net When built 1913-6
 Engines made at *Luton* By whom made *the Vanhale - West Hydraulic Eng Co Ld* when made 1913
 Boilers made at *Stockton* By whom made *Riley Bros* when made 1913
 Registered Horse Power Owners *J. Gray & Co Ld* Port belonging to *Hull*
 Nom. Horse Power as per Section 28 *37* Is Refrigerating Machinery fitted for cargo purposes *no* Is Electric Light fitted *no*

ENGINES, &c.—Description of Engines *Camp Surface Condensing* No. of Cylinders *2* No. of Cranks *2*
 Dia. of Cylinders *12 1/2 - 26* Length of Stroke *20* Revs. per minute *137* Dia. of Screw shaft *as per rule 6.156* Material of *Steel*
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube *no liners* Is the after end of the liner made water tight
 in the propeller boss *✓* 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
 liners are fitted, is the shaft lapped or protected between the liners *✓* Length of stern bush *2 - 2*
 Dia. of Tunnel shaft *as per rule 5.48* Dia. of Crank shaft journals *as per rule 5.75* Dia. of Crank pin *5 3/8* Size of Crank webs *8 1/2 x 4 1/2* Dia. of thrust shaft under
 collars *5 7/8* Dia. of screw *6 - 0* Pitch of Screw *9 - 0* No. of Blades *4* State whether moveable *no* Total surface *18 sq ft*
 No. of Feed pumps *one* Diameter of ditto *2* Stroke *10* Can one be overhauled while the other is at work *✓*
 No. of Bilge pumps *one* Diameter of ditto *2* Stroke *10* Can one be overhauled while the other is at work *✓*
 No. of Donkey Engines *two duplex* Sizes of Pumps *1 1/2 x 2 1/4 + 4 x 4 1/2 + 2 1/4 x 4* No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room *one 2* In Holds, &c. *one 2 in each compartment*
 No. of Bilge Injections *one* sizes *2 3/4* Connected to condenser, or to circulating pump *pump* Is a separate Donkey Suction fitted in Engine room & size *yo 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 *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 *✓*
 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 *19-4-13* of Stern Tube *19-4-13* Screw shaft and Propeller *19-4-13*
 Is the Screw Shaft Tunnel watertight *none* Is it fitted with a watertight door *✓* worked from *✓*

BOILERS, &c.—(Letter for record) Manufacturers of Steel
 Total Heating Surface of Boilers *11.5 sq ft* Forced Draft fitted *no* No. and Description of Boilers
 Working Pressure *140 lb* Tested by hydraulic pressure to *145* Date of test *19-4-13* No. of Certificate
 Can each boiler be worked separately *✓* Area of fire grate in each boiler *26.4* No. and Description of Safety Valves to
 each boiler *two spring loaded* Area of each valve *145* Pressure to which they are adjusted *145* Are they fitted with easing gear *yes*
 Smallest distance between boilers or uptakes and bunkers or woodwork *abt 2 ft* Mean dia. of boilers *26* Length *26* Material of shell plates
 Thickness *1/2* Range of tensile strength *45,000* Are the shell plates welded or flanged *no* Descrip. of riveting: cir. seams
 long. seams *no* Diameter of rivet holes in long. seams *1/4* Pitch of rivets *2* Lap of plates or width of butt straps
 Per centages of strength of longitudinal joint *100* Working pressure of shell by rules *145* Size of manhole in shell
 Size of compensating ring *12* No. and Description of Furnaces in each boiler *1* Material *cast iron* Outside diameter
 Length of plain part *12* Thickness of plates *1/2* Description of longitudinal joint *butt* No. of strengthening rings
 Working pressure of furnace by the rules *145* Combustion chamber plates: Material *cast iron* Thickness: Sides *1/2* Back *1/2* Top *1/2* Bottom
 Pitch of stays to ditto: Sides *12* Back *12* Top *12* If stays are fitted with nuts or riveted heads *no* Working pressure by rules
 Material of stays *cast iron* Diameter at smallest part *1/2* Area supported by each stay *12* Working pressure by rules *145* End plates in steam space:
 Material *cast iron* Thickness *1/2* Pitch of stays *12* How are stays secured *by nuts* Working pressure by rules *145* Material of stays
 Diameter at smallest part *1/2* Area supported by each stay *12* Working pressure by rules *145* Material of Front plates at bottom
 Thickness *1/2* Material of Lower back plate *cast iron* Thickness *1/2* Greatest pitch of stays *12* Working pressure of plate by rules
 Diameter of tubes *1/2* Pitch of tubes *12* Material of tube plates *cast iron* Thickness: Front *1/2* Back *1/2* Mean pitch of stays
 Pitch across wide water spaces *12* Working pressures by rules *145* Girders to Chamber tops: Material *cast iron* Depth and
 thickness of girder at centre *12* Length as per rule *12* Distance apart *12* Number and pitch of stays in each
 Working pressure by rules *145* Superheater or Steam chest; how connected to boiler *by pipes* Can the superheater be shut off and the boiler worked
 separately *no* Diameter *12* Length *12* Thickness of shell plates *1/2* Material *cast iron* Description of longitudinal joint *butt* Diam. of rivet
 holes *1/4* Pitch of rivets *2* Working pressure of shell by rules *145* Diameter of flue *12* Material of flue plates *cast iron* Thickness
 If stiffened with rings *no* Distance between rings *12* Working pressure by rules *145* End plates: Thickness *1/2* How stayed
 Working pressure of end plates *145* Area of safety valves to superheater *145* Are they fitted with easing gear *no*



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	Radius of do.	Stayed by		
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

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, two feed & bilge pump valves a quantity of assorted bolts & nuts & iron of various sizes*

THE VAUXHALL & WEST HYDRAULIC ENGINEERING COY. LTD.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building: During progress of work in shops -- *Nov. 1st. (1912) Feb 13. Mar. 4. 11. Apr. 10.*
 During erection on board vessel --- *1913. - Apr. 19. May 5. 10. 17. Jun 27*
 Total No. of visits *5 + 5 = 10.*

Is the approved plan of main boiler forwarded herewith *No*

" " " donkey " " " *✓*

Dates of Examination of principal parts—Cylinders *1. 11. 13* Slides *13. 2. 13* Covers *1. 11. 13* Pistons *13. 2. 13* Rods *13. 2. 13*
 Connecting rods *13. 2. 13* Crank shaft *13. 2. 13* Thrust shaft *10. 4. 13* Tunnel shafts *13. 2. 13* Screw shaft *13. 2. 13* Propeller *10. 4. 13*
 Stern tube *10. 4. 13* Steam pipes tested *10. 5. 13* Engine and boiler seatings *19. 4. 13* Engines holding down bolts *17. 5. 13*
 Completion of pumping arrangements *27. 6. 13* Boilers fixed *17. 5. 13* Engines tried under steam *27. 6. 13*
 Main boiler safety valves adjusted *27. 6. 13* Thickness of adjusting washers *Port 3/8 Starboard 1/32*
 Material of Crank shaft *Steel* Identification Mark on Do. *13. 2. 13* Material of Thrust shaft *Steel* Identification Mark on Do. *Nº 193*
 Material of Tunnel shafts *Steel* Identification Marks on Do. *Nº 194* Material of Screw shafts *Steel* Identification Marks on Do. *Nº 195*
 Material of Steam Pipes *Solid drawn copper* Test pressure *300 lbs*

General Remarks (State quality of workmanship, opinions as to class, &c.) *These Engines have been constructed under special survey, the material has been tested as required by the Rules and the workmanship is good, they have been sent to Hull to be fitted on board.*

The machinery of this vessel has been properly fitted on board & secured & on completion was tested under steam & found to work satisfactorily, the safety valves have been adjusted & tested for accumulation.

In my opinion the vessel is eligible for the record + A. R. 6. 6. 13.

This vessel is fitted with a 8 1/2" centrifugal pump for salvage & fire purposes.

It is submitted that this vessel is eligible for THE RECORD. + LMC 6. 13.

JWD 4/7/13

The amount of Entry Fee .. £ *1 : 0 : 0* When applied for, *5 Mar 1913*
 Special *3/32* .. £ *5 : 13 : 0*
 Donkey Boiler Fee .. £ : : :
 Travelling Expenses (if any) £ *1 : 14 : 4* When received, *8/5/13*

Thomas Mackie Frank L. Sturgeon
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *FRI. JUL 4 - 1913*

Assigned *+ Lond 6 13*



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Lloyd's Register Foundation

Rpt. 5a

Date of certificate

No. in Reg. Book.

Master

Engines

Boilers

Registered

MULTIPLE

(Letter for)

Boilers

No. of Certificate

safety valves

Are they fitted

Smallest diameter

Material of

No. 45

This request is

foreign Shipping

while the Committee

and that neither the

report or certificate is

or for any error of

MEMO

all cases will

to be defra

LLOYD'S REGISTER

Secretary

Lloyd's Register

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