

## REPORT ON MACHINERY

No. 290  
TUE. JUL. 23. 1918

Received at London Office

Date of writing Report 22/7/18 When handed in at Local Office 22/7/18 Port of *Sheffield & Gool*

No. in Survey held at *Halifax & Gool* Date, First Survey 30/7/17 Last Survey 24/9/17

Reg. Book. on the *Trawler William Doak* (Number of Visits 13) Gross 324

Master Built at *Gool* By whom built *Gool Shipbuilding & Repairing Co.* Tons 149

Engines made at *Halifax* By whom made *The Campbell & Co. Engine Co.* When built 1918

Boilers made at *Glasgow* By whom made *Lindsay Burnet & Co.* when made 1918

Registered Horse Power 300 Owners *British Admiralty* Port belonging to

Norm. Horse Power as per Section 28 87 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

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

Dia. of Cylinders 13" 23" 37" Length of Stroke 26" Revs. per minute Dia. of Screw shaft as per rule 7.9" Material of *Chel*

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 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 3'0"

Dia. of Tunnel shaft as per rule 7.04 Dia. of Crank shaft journals as per rule 7.34 Dia. of Crank pin 7.5" Size of Crank webs 44x42 Dia. of thrust shaft under

collars 7.6" Dia. of screw 9.7 1/2" Pitch of Screw 11'0" No. of Blades 4 State whether moveable *no* Total surface 33 1/2

No. of Feed pumps *one* Diameter of ditto 2 1/2" Stroke 14 1/2" Can one be overhauled while the other is at work

No. of Bilge pumps *one* Diameter of ditto 2 1/2" Stroke 14 1/2" Can one be overhauled while the other is at work

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

In Engine Room TWO 2" DIA. In Holds, &c. THREE 2" DIA.

ALL SUCTIONS ALSO CONNECTED TO EJECTOR

No. of Bilge Injections 1 sizes 3 1/2" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size 1 1/2" 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 *Forward Suctions* How are they protected *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

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

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

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

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

each boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates

Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Per centages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell

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

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

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

Material of stays Area at smallest part Area supported by each stay Working pressure by rules End plates in steam space:

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

Area at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

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

thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each

Working pressure by rules 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

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



# IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Two top end & two bot end bolts & nuts, two main bearing bolts and nuts, 1 set of coupling bolts & nuts, one set of air, feed & bilge pump valves, one set of junk ring studs & nuts, one main & one donkey check valve, two valves for donkey pump, one safety valve spring, three condenser tubes, a set of firebars, a quantity of bolts & nuts & iron of various sizes

The foregoing is a correct description,

P.P. The Cambridge Gas Engine Co. Ltd.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 30.7-7.8-7.9-14.9-26.9-17.10-24.10-7.11-13.11-23.11-10.12-21.12/17  
During erection on board vessel - - - Hull: 1915: - Jul 9. 10. Aug 1. 19. 21. 22. 23. 29 Sep. 2. 10. 11. 12. 18. 24  
Total No. of visits 27

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 7/8 10/4/17 Slides 7/8 10/4/17 Covers 7/8 10/4/17 Pistons 7/8 10/4/17 Rods 7/9 10/4/17  
Connecting rods 7/9 10/4/17 Crank shaft 7/9 10/4/17 Thrust shaft 7/9 10/4/17 Tunnel shafts - Screw shaft 7/9 10/4/17 Propeller 7/9 10/4/17  
Stern tube 13/11/16 Steam pipes tested 12-9-18 Engine and boiler seatings 10-7-18 Engines holding down bolts 22-8-18  
Completion of pumping arrangements 20-9-18 Boilers fixed 22-8-18 Engines tried under steam 18-9-18  
Completion of fitting sea connections 10-7-18 Stern tube 10-7-18 Screw shaft and propeller 10-7-18  
Main boiler safety valves adjusted 18-9-18 Thickness of adjusting washers 5/16.

Material of Crank shaft Steel Identification Mark on Do. 778 Material of Thrust shaft Steel Identification Mark on Do. 778  
Material of Tunnel shafts - Identification Marks on Do. - Material of Screw shafts Steel Identification Marks on Do. 778  
Material of Steam Pipes S.O. Copper 4" DIA. Test pressure 400 lbs A"

Is an installation fitted for burning oil fuel 720. 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 720 If so, state name of vessel Mercury Class

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel has been built under special survey and in accordance with the Specification and the Society Rules, materials and workmanship are sound and good.

The machinery of this vessel has been properly fitted and secured on board at Gool. the steam pipe tested as above & on completion the machinery was tested under full power as required by the admiralty and found satisfactory the safety valves have been tested for accumulation. In my opinion the vessel is eligible for record of +LMC 9-10

It is submitted that as this vessel is not intended for classification further action is unnecessary

installing  
The amount of Entry Fee ... £ 4 - 6  
Special ... £ 14 - 0 - 0  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ 3 : 14 - 3

When applied for,

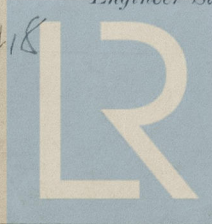
When received,

Committee's Minute TUE JUL 4 1922

Assigned

See Don. Rpt. 11273

P.F. Motin, W.H. Roberts, Engineer Surveyor to Lloyd's Register of Shipping.



Lloyd's Register Foundation