

Rpt. 4.

## REPORT ON MACHINERY.

No. 312

Received at London Office

WED. 5 FEB. 1919

Date of writing Report 1/2/19 When handed in at Local Office 1/2/19

Port of SHEFFIELD

No. in Survey held at SONERBY BRIDGE

Date, First Survey 17/6/18

Last Survey

19

Reg. Book.

on the DRIFTER ENGINE No. 136

S.S. "GROSS"

(Number of Visits)

Master

Built at LOWESTOFT

By whom built COLBY BROS No. 99

Tons { Gross  
Net

When built 1919

Engines made at SONERBY BRIDGE

By whom made POLLITT &amp; WAZELL LTD

when made 1918

Boilers made at Lincoln

By whom made Ruston &amp; Hornsby Ltd

43132 when made 1918

Registered Horse Power 270

Owners BRITISH ADMIRALTY

Port belonging to ✓

Nom. Horse Power as per Section 28 42.4

Is Refrigerating Machinery fitted for cargo purposes ✓

Is Electric Light fitted No

## ENGINES, &amp;c.—Description of Engines

Triple expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders  $9\frac{1}{2} \times 15\frac{1}{2} \times 26$  Length of Stroke 18" Revs. per minute

Dia. of Screw shaft as per rule 5.45 as fitted 6" Material of screw shaft steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube ✓

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 24"

Dia. of Tunnel shaft as per rule 4.796 as fitted

Dia. of Crank shaft journals as per rule 5.04 as fitted

Dia. of Crank pin 5" Size of Crank webs 6"3/4 Dia. of thrust shaft under collars 5 1/2"

Dia. of screw 6'9" Pitch of Screw 8'6"

No. of Blades 4 State whether moveable No Total surface 18 1/2

No. of Feed pumps 2 Diameter of ditto 2 1/2" Stroke 9" Can one be overhauled while the other is at work ✓

No. of Bilge pumps 2 Diameter of ditto 2 1/2" Stroke 9" Can one be overhauled while the other is at work ✓

No. of Donkey Engines one Sizes of Pumps 5 1/4" x 3 1/2" x 5" Duplex No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Two 2" ✓ one ejector 2" ✓ In Holds, &amp;c. One 2"

No. of Bilge Injections one-size 2 1/2" Connected to condenser, or to circulating pump e. j. p. Is a separate Donkey Suction fitted in Engine room &amp; size Yes 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 ✓

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 Yes

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 ✓

Is the Screw Shaft Tunnel watertight ✓ Is it fitted with a watertight door ✓ worked from ✓

## BOILERS, &amp;c.—(Letter for record S.) Manufacturers of Steel

Total Heating Surface of Boilers 814 1/2 Is Forced Draft fitted ✓ No. and Description of Boilers One single ended

Working Pressure 180 lb Tested by hydraulic pressure to 360 lb Date of test 20-12-18 No. of Certificate 172

Can each boiler be worked separately ✓ Area of fire grate in each boiler 30.5 1/2 No. and Description of Safety Valves to

each boiler 2 Spring loaded Area of each valve 3.98 Pressure to which they are adjusted 180 lb Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 6" INT. Mean dia. of boilers 10'-0" Length 9'-6" 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

YK  
5/2/19910-3121M  
W1213-0166



IS A DONKEY BOILER FITTED? ✓

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

2 Bonrod top End bolts. ✓  
2 " " bolt " " ✓  
2 Main bearing bolts ✓  
1 set coupling bolts ✓  
1 set feed, bilge, cut air pp valves. ✓  
6 Condenser tubes + 12 fenders. ✓

24 Assorted bolts + nuts ✓  
6 Cylinder cover studs + nuts  
6 Junk ring bolts + nuts  
1 Valve for main + 1 for donkey check.  
1 Spring for safety valve  
6 gauge glasses + rings  
3 plain boiler tubes  
1 set of fire bars turning bars for both furnaces. ✓

The foregoing is a correct description.

PORTFOLIO & WIGZELL LIMITED.

*E. J. Pollitt*

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 17/6. 2/7. 17/7. 1/8. 12/8. 12/9. 28/9. 1/10. 10/10. 25/10. 1/11. 8/11. 15/11. 25/11. 2/12. 10/12. 23/12. 31/12.  
During erection on board vessel --- 1919 - Mar 12. Apr 7. 16. 25. May 9. 28. June 5. 26. July 7. 8. 9. 17. 29.  
Total No. of visits 31.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 17/6/19 Slides 17/6/19 Covers 1/8/19 Pistons 18/5/19 Rods 1/8/19  
Connecting rods 1/8/19 Crank shaft 1/8/19 Thrust shaft 1/8/19 Tunnel shafts 1/8/19 Screw shaft 1/8/19 Propeller 1/8/19  
Stern tube 1/8/19 Steam pipes tested 26-6-19 Engine and boiler seatings 24-1-19 Engines holding down bolts 4-4-19  
Completion of pumping arrangements 8-7-19 Boilers fixed 12-3-19 Engines tried under steam 8-7-19  
Completion of fitting sea connections 31-12-18 Stern tube 31-12-18 Screw shaft and propeller 31-12-18  
Main boiler safety valves adjusted 8-7-19 Thickness of adjusting washers  $P \frac{3}{8}''$   $S \frac{13}{32}''$   
Material of Crank shaft *Steel* Identification Mark on Do. 4708 Material of Thrust shaft *Steel* Identification Mark on Do. 4701  
Material of Tunnel shafts ✓ Identification Marks on Do. - Material of Screw shafts *Steel* Identification Marks on Do. 4707  
Material of Steam Pipes *Copper* Test pressure 360 lbs per sq in

Is an installation fitted for burning oil fuel ✓

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 *yes* If so, state name of vessel *Drifter Engine*

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's Rules, material and workmanship are sound and good.*  
*The Engines & boiler examined whilst being installed in the vessel, afterwards tried under full power, and found satisfactory, the safety valves adjusted to 180 lbs. and is now eligible in our opinion for the record of + L.M.C. 8-19. in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD + LMC 7.19.

The amount of Entry Fee ... £  
Special ... £ 9-0-0  
Donkey Boiler Fee ... £ 4-10-0  
Travelling Expenses (if any) £

When applied for,

When received,

*P. L. Morton A. R. Farminer*  
Engineer Surveyor to Lloyd's Register of Shipping.  
*Robert Rae*

Committee's Minute

Assigned

*June 7. 19*

REGISTERED CERTIFICATE  
WRITTEN



Lloyd's Register  
Foundation