

# REPORT ON MACHINERY

No. 34619

WED. 27 MAR. 1918

Received at London Office

Date of writing Report 20. 3. 1918 When handed in at Local Office 23. 3. 1918 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 13th July 1917 Last Survey 19. 3. 1918  
Reg. Book. on the Machinery for H. M. DRIFTER "BLIZZARD" N<sup>o</sup> 97. Tons { Gross 29 July 1918

Master Built at Lowestoft By whom built Colly Bros Ltd. When built 1918.

Engines made at Coatbridge By whom made G. B Diesel Eng. Co. N<sup>o</sup> 5 when made 1918.  
Boilers made at Aldbury By whom made Edin Danks & Co Ltd when made 1918.

Registered Horse Power 43 Owners H. M. Government Port belonging to  
Nom. Horse Power as per Section 28 42.5 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3  
Dia. of Cylinders 9 1/2", 15 1/2", 26" Length of Stroke 18" Revs. per minute Dia. of Screwshaft 5.45" as per rule 5.42" Material of screw shaft Steel  
as fitted 6" as fitted

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 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'-1"

Dia. of Tunnel shaft as per rule 4.80" as fitted None Dia. of Crank shaft journals as per rule 5.06" 5.04" as fitted 5.25" Dia. of Crank pin 5 1/4" Size of Crank webs 10" x 3 1/2" Dia. of thrust shaft under  
collars 5 1/4" Dia. of screw 6-9" Pitch of Screw 8-6" No. of Blades 4 State whether moveable No Total surface 18 sq ft

No. of Feed pumps 1 Diameter of ditto 2 1/2" Stroke 9" Can one be overhauled while the other is at work  
No. of Bilge pumps 1 Diameter of ditto 2" Stroke 9" Can one be overhauled while the other is at work  
No. of Donkey Engines 1 Sizes of Pumps 5 1/4" x 3 1/2" Duplex No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room Two 2" dia. + one Ejector In Holds, &c. One 2" dia.

No. of Bilge Injections 1 sizes 2 1/2" Connected to condenser, or to circulating pump No Is a separate Donkey Suction fitted in Engine room of 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 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 22-3-18 of Stern Tube 22-3-18 Screw shaft and Propeller 22-3-18

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

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

Total Heating Surface of Boilers 814 sq ft Is Forced Draft fitted No No. and Description of Boilers 1 Single ended marine.  
Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 16-4-18 No. of Certificate 384

Can each boiler be worked separately Area of fire grate in each boiler 36 sq ft No. and Description of Safety Valves to  
each boiler 1 pair Spring loaded of each valve 3 9/4" Pressure to which they are adjusted 185 lb Are they fitted with casing gear Yes  
Smallest distance between boilers or uptakes and bunkers or woodwork 6" 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  
Pitch of rivets Lap of plates or width of butt straps  
Percentage of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell  
Material Outside diameter  
Description of longitudinal joint No. of strengthening rings  
Thickness of plates crown Bottom  
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 Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam spaces:  
Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays  
Diameter 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 Superheater or Steam chest; how connected to boiler: Can the superheater be shut off and the boiler worked  
separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivets  
Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness  
Stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed  
Working pressure of end plates Area of safety valves to superheater Are they fitted with casing gear

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Lloyd's Register Foundation

009493-009504-0246

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? *-*

SPARE GEAR. State the articles supplied:—

*2 Connecting rod top end + 2 Connecting rod bottom end bolts + nuts, 2 main bearing bolts, 1 set of coupling bolts + nuts, 1 set of piston rings, 1 set of feed + bilge pump valves, a quantity of assorted bolts + nuts, Iron of various sizes*

The foregoing is a correct description,  
FOR THE NORTH BRITISH DIESEL ENGINE WORKS, LTD.

*John Holloway*  
Works Manager. Manufacturer.

Dates of Survey while building { During progress of work in shops -- *1917 July 13 Aug 9 31 Sep 6 14 20 Oct 3 22 30 Nov 5 8 12 15 20 21 26 29 30 Dec 3 12 14 18 24 28 1918*  
During erection on board vessel -- *11 14 24 25 30 31 Feb 8 12 21 26 Mar 5 11 16 18 19* Mar 23 Apr 5 29 30 May 10 Jun 18  
Total No. of visits *41*

Is the approved plan of main boiler forwarded herewith *-*

Dates of Examination of principal parts—Cylinders *26-2-18* Slides *21-2-18* Covers *21-2-18* Pistons *21-2-18* Rods *26-11-18*

Connecting rods *26-11-18* Crank shaft *26-2-18* Thrust shaft *16-3-18* Tunnel shafts *-* Screw shaft *31-1-18* Propeller *31-1-18*

Stern tube *31-1-18* Steam pipes tested *✓* Engine and boiler seatings *5-4-18* Engines holding down bolts *29-4-18*

Completion of pumping arrangements *29-7-18* Boilers fixed *5-4-18* Engines tried under steam *29-7-18*

Main boiler safety valves adjusted *29-7-18* Thickness of adjusting washers *1/2 P. 3/8 S.*

Material of Crank shaft *S* Identification Mark on Do. *1036 F.F.F. 26-2-18* Material of Thrust shaft *S* Identification Mark on Do. *1036 F.F.F. 16-3-18*

Material of Tunnel shafts *Yone* Identification Marks on Do. Material of Screw shafts *S* Identification Marks on Do. *1036 F.F.F. 31-1-18*

Material of Steam Pipes *Copper* Test pressure *360 lb.*

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 *H. G. Duffles "Cold Snap" (See Report 374 84)*

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

*The Machinery has been built under special survey in accordance with the Rules of the Society + the approved Admiralty Specification + has been forwarded to Lowestoft to be fitted on board the vessel.*

*The workmanship + materials are of good quality throughout. The Machinery is eligible, in my opinion to have record of T.L.M.C. with date when it has been securely fitted on board + tried under steam with satisfactory results.*

*The Engines + boiler have been examined during the installation in the vessel, afterwards tried under working conditions + found satisfactory, + is now eligible for the record of T.L.M.C. 7-18 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD. T.L.M.C. 7-18

Fitting out at Lowestoft *£4-10-0*  
Piles Fee *£4-10-0*

The amount of Entry Fee ... £ : : When applied for.  
Special Survey ... £ 9 : 0 : 26-3-1918  
Donkey Boiler Fee ... £ 4 : 10 : 0 9-12-18  
Travelling Expenses (if any) £ : : 5-6-18  
*£4-10-0 pd. 7-4-19 75W*

*Geo. A. Ferguson*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping  
*A. E. Farminer*

Committee's Minute *GLASGOW 26 MAR 1918*  
Assigned *Deferred for compln*

FRI DEC 13 1918



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The Surveyors are requested not to write on or below the space for Committee's Minute.

Rpt. 5a.  
Date of writing Report  
No. in Survey Reg. Book.  
on the  
Master  
Engines made at  
Boilers made at  
Registered Horse P  
MULTITUBU  
Letter for record  
Boilers  
No. of Certificate  
Safety valves to each  
Are they fitted with  
Smallest distance bet  
Material of shell pla  
Descrip. of riveting  
Up of plates or wid  
Ex 191 lb  
S  
ller  
Description of longitud  
Material  
If stays  
Smallest part 1/5  
Ch of stays 14 1/4  
Supported by each  
Over back plate  
Ch of tubes 4 3/4  
er spaces 10  
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Working pressure by ru  
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Th  
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ERHEATER.  
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During progress  
work in shops  
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During erection  
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GENERAL REMA  
under spec  
Piles and  
Survey Fee  
Travelling Expenses (if a  
Committee's Minute  
igned  
Lloyd's Register  
Foundation