

REPORT ON MACHINERY

No. 2574

12 JUL 1917

Date of writing Report 5.7.1917 When handed in at Local Office 5.7.1917 Port of Sheffield
 No. in Survey held at Halifax - Yorks Date, First Survey 26.1.17 Last Survey 29.7.1917
 Reg. Book. on the Admiralty Trawler "Murray" Class "John Pascoe" (Number of Visits 17) Gross 20-2-17 Net 17
 Master Built at Selly By whom built Cochrane & Co Tons } Not
 Engines made at Halifax By whom made The Campbell & Co Eng. Co Ltd When built 1917-7
 Boilers made at Hull By whom made C. D. Holmes & Co Ltd A2 when made 1917-7
 Registered Horse Power 600 Owners British Admiralty Port belonging to ✓
 Nom. Horse Power as per Section 28 87 ✓ Is Refrigerating Machinery fitted for cargo purposes ✓ Is Electric Light fitted no

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 116 Dia. of Screw shaft as per rule 7.9" Material of screw shaft Steel
 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 ✓ 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" as fitted 7.39" Dia. of Crank shaft journals as per rule 7.39" as fitted 7.50" Dia. of Crank pin 7.5" Size of Crank webs 44x42 Dia. of thrust shaft under
 collars 7.5" Dia. of screw 9.7 1/2" Pitch of Screw 11' 0" No. of Blades 4 State whether moveable - Total surface 33 sq ft
 No. of Feed pumps 2 Diameter of ditto 2 5/8" Stroke 14 3/4" Can one be overhauled while the other is at work - 70 cwt
 No. of Bilge pumps 2 Diameter of ditto 2 5/8" Stroke 14 3/4" Can one be overhauled while the other is at work -
 No. of Donkey Engines 2 Sizes of Pumps 6", 4 1/4" x 6" duplex No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room two 2" dia In Holds, &c. one 2" dia in each compartment
all suction also connected to 3" gully
 No. of Bilge Injections one sizes 3 1/2" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 3" gully
 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 Forward suction How are they protected strong casing fixed with wire
 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, &c.—(Letter for record (S) Manufacturers of Steel

Total Heating Surface of Boilers 1440 Is Forced Draft fitted no No. and Description of Boilers 1 S.B.
 Working Pressure 200 lb Tested by hydraulic pressure to Date of test No. of Certificate
 Can each boiler be worked separately Area of fire grate in each boiler 48 sq ft 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 3 plates Material Outside diameter
 Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings
 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 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 bolts & nuts, two bottom end bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set of air, feed & discharge pump valves, one main & one donkey chest valve, two valves for donkey pump, 6 junk iron studs & nuts, one safety valve spring, 3 condenser tubes, one set of fire bar, & a quantity of bolts & nuts & wire of various sizes.

The foregoing is a correct description,

p.p. The Campbell Gas Engine Co. Ltd.

W. Marsden

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 25/1 - 2-9-17 16-23/2-12-15-23/3 - 5-27/4 - 7-16/5 - 6-15-29/6/7
During erection on board vessel -- See Hull Bkr Rpt No 30.075
Total No. of visits

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 9/25 24/4/17 Slides 9/26 24/4/17 Covers 9/26 24/4/17 Pistons 9/26 24/4/17 Rods 9/26 24/4/17

Connecting rods 9/26 24/4/17 Crank shaft 9/26 24/4/17 Thrust shaft 9/26 24/4/17 Tunnel shafts - Screw shaft 9/26 24/4/17 Propeller 9/26 24/4/17

Stern tube 9/26 24/4/17 Steam pipes tested 18-7-17 Engine and boiler seatings 12-4-17 Engines holding down bolts 13-7-17

Completion of pumping arrangements 24-7-17 Boilers fixed 13-7-17 Engines tried under steam 24-7-17

Completion of fitting sea connections 12-4-17 Stern tube 12-4-17 Screw shaft and propeller 12-4-17

Main boiler safety valves adjusted 21-7-17 Thickness of adjusting washers 7 1/32 & 3/16

Material of Crank shaft Steel Identification Mark on Do. N° 701 Material of Thrust shaft Steel Identification Mark on Do. N° 702

Material of Tunnel shafts - Identification Marks on Do. - Material of Screw shafts Steel Identification Marks on Do. N° 675

Material of Steam Pipes Solid drawn copper Test pressure 40 lb

Is an installation fitted for burning oil fuel no 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 "Mersey" Class "John Yule"

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery 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 engine has been forwarded to Hull to be fitted on board the vessel

The machinery of this vessel has been properly fitted & secured on board the vessel, the steam pipes tested as above, found sound & good, on completion it was tried under full power for two hours as required by the Admiralty & found satisfactory.

The safety valves have been adjusted under steam & tested for accumulation which did not exceed 2 1/2 lbs

In my opinion the vessel is eligible for the record + L.M.C. 7.17

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 7.17.

The amount of Entry Fee ... £ 14 - 0 - 0 When applied for, 1-5-1917
Special Hull Fitting out ... £ 6 - 10 - 0 When received, 18-11-17
Donkey Boiler Fee ... £ 4 - 11 - 9
Travelling Expenses (if any) ... £ 4 - 11 - 9

Committee's Minute FRI. AUG. 31 1917

Assigned + L.M.C. 7.17

Rpt. 5a.

Date of writing Report

No. in Survey

Reg. Book.

on the

Master

Engines made

Boilers made at

Registered Horse

MULTITUB

Letter for recor

Boilers me

No. of Certificat

safety valves to

Are they fitted w

Smallest distanc

Material of shell

Descrip. of rivets

Lap of plates or

rules 202

boiler 1/2 in

Description of lon

plates: Material

Top 1 1/2 x 8 If

smallest part 2

Pitch of stays 19

Area supported b

Lower back plate

Pitch of tubes 4

water spaces

girder at centre

Working pressure

separately ✓

holes ✓ Pitch

if stiffened with ri

Working pressure

Dates of Survey

while work in

building During

GENERAL

under sp

the materi

above for

its safety

Survey Fee

Travelling Exp

Committee's

Assigned