

## REPORT ON MACHINERY.

No. 17608

Received at London Office

WED. 20 AUG. 1919

Date of writing Report

19

When handed in at Local Office

15th August 1919

Port of

Greenock.

To. in  
Reg. Book.

Survey held at Port-Glasgow &amp; Glasgow. Date, First Survey 19th April 1918

Last Survey 13th August 1919

on the Steel Screw Steamship "Backworth"

(Number of Visits 10.)

Gross 2481.39  
Net 1441.97  
When built 1919.

Master A. Colvin

Built at Port-Glasgow

By whom built Dunlop, Bremner &amp; Co. Ltd.

Engines made at Port-Glasgow

By whom made Dunlop, Bremner &amp; Co. Ltd.

when made 1919.

Boilers made at Glasgow

By whom made D. Colville &amp; Sons, Limited.

when made 1919.

Registered Horse Power 175.5

Owners The Robert Stanley Shipping Co. Ltd.

Port belonging to Newcastle-on-Tyne.

Nom. Horse Power as per Section 28 262

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes.

ENGINES, &amp;c.—Description of Engines

Inverted, direct acting, triple. Centrif.

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 22" 36" + 49"

Length of Stroke 39"

Revs. per minute 70

Dia. of Screw shaft

Material of screw shaft

J. 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

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 4' 10"

Dia. of Tunnel shaft

as per rule 10.94

as fitted 11"

Dia. of Crank shaft journals

as per rule 11.49

as fitted 11 3/4"

Dia. of Crank pin 1 3/4"

Size of Crank webs 22 1/2" x 7 1/2"

Dia. of thrust shaft under

collars 12"

Dia. of screw 1 5/8"

Pitch of Screw 1 5/8"

No. of Blades 4

State whether moveable No

Total surface 77 sq ft.

No. of Feed pumps 2

Diameter of ditto 8"

Stroke 24"

Can one be overhauled while the other is at work Yes.

No. of Bilge pumps 2

Diameter of ditto 3 1/2"

Stroke 24"

Can one be overhauled while the other is at work Yes.

No. of Donkey Engines 5

Sizes of Pumps 2 simple 8 &amp; 4 1/2" 10 &amp; 12 1/2" 18" 24" 30" 36" 42" 48" 54" 60" 66" 72" 78" 84" 90" 96" 102" 108" 114" 120" 126" 132" 138" 144" 150" 156" 162" 168" 174" 180" 186" 192" 198" 204" 210" 216" 222" 228" 234" 240" 246" 252" 258" 264" 270" 276" 282" 288" 294" 300" 306" 312" 318" 324" 330" 336" 342" 348" 354" 360" 366" 372" 378" 384" 390" 396" 402" 408" 414" 420" 426" 432" 438" 444" 450" 456" 462" 468" 474" 480" 486" 492" 498" 504" 510" 516" 522" 528" 534" 540" 546" 552" 558" 564" 570" 576" 582" 588" 594" 600" 606" 612" 618" 624" 630" 636" 642" 648" 654" 660" 666" 672" 678" 684" 690" 696" 702" 708" 714" 720" 726" 732" 738" 744" 750" 756" 762" 768" 774" 780" 786" 792" 798" 804" 810" 816" 822" 828" 834" 840" 846" 852" 858" 864" 870" 876" 882" 888" 894" 900" 906" 912" 918" 924" 930" 936" 942" 948" 954" 960" 966" 972" 978" 984" 990" 996" 1000"

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room "Two 3", two 3 1/2" &amp; one 2 1/2" in tunnel. In Holds, &amp;c. Fore hold, two 3": fore main hold, two 3": aft main hold, two 3" and after hold, two 3".

No. of Bilge Injections 4 size 9 1/2"

Connected to condenser, or to circulating pump C.P.

Are all the bilge suction pipes fitted with roses Yes

Are the roses in Engine room 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.

Is the Screw Shaft Tunnel watertight Yes.

Is it fitted with a watertight door Yes.

BOILERS, &amp;c.—(Letter for record S.)

Manufacturers of Steel D. Colville &amp; Sons, Limited.

Total Heating Surface of Boilers 4426 sq ft

Is Forced Draft fitted No

Working Pressure 180 lbs

Tested by hydraulic pressure to 360 lbs

Can each boiler be worked separately Yes.

Area of fire grate in each boiler 62 sq ft

each boiler "Two spring loaded"

Area of each valve 8.29 sq ft

Smallest distance between boilers or uptakes and bunkers or woodwork 2' 6"

Mean dia. of boilers 15' 6"

Thickness Range of tensile strength

Are the shell plates welded or flanged

long. seams

Descrip. of riveting: cir. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Per centages of strength of longitudinal joint

Working pressure of shell by rules

Size of compensating ring

Size of manhole in shell

Length of plain part

No. and Description of Furnaces in each boiler

Thickness of plates

Material Outside diameter

Working pressure of furnace by the rules

Combustion chamber plates: Material

Pitch of stays to ditto: Sides

Thickness: Sides

Material of stays

Area at smallest part

Area supported by each stay

Working pressure by rules

Material Thickness

Pitch of stays

Area at smallest part

Area supported by each stay

Thickness Material of Lower back plate

Thickness Greatest pitch of stays

Diameter of tubes

Pitch of tubes

Pitch across wide water spaces

Working pressures by rules

thickness of girder at centre

Length as per rule

Working pressure by rules

Steam dome: description of joint to shell

Diameter Thickness of shell plates

Material Description of longitudinal joint

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

Diameter of Safety Valve

Pressure to which each is adjusted

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Is Easing Gear fitted

SUPERHEATER. Type

Date of Approval of Plan

Date of Test

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler



IS A DONKEY BOILER FITTED?

Yes.

If so, is a report now forwarded?

Yes, No. 3867.

SPARE GEAR. State the articles supplied:—

Two connecting rod top end bolts nuts, two connecting rod bottom end bolts nuts, two main bearing bolts nuts, three crank shaft bolts nuts, three tunnel shaft end bolts nuts, the set of feed and bilge pump valves, the set air pump valves, one solid cast iron propeller, two main boiler safety valve springs, 58 furnace bars, a quantity of assorted bolts nuts, and iron of various sizes.

The foregoing is a correct description,

DUNLOP, BREMNER & COY. LIMITED,

Thos Paton

Manufacturer.

Dates of Survey while building { During progress of work in shops - - (1918) Apr 17-22-24-30 May 1-3-28 June 4-11-18-24 July 1-16-28-22-26-27-31 Aug 1-7-8-9-20-27 Oct 3-7-21-24-28-30  
During erection on board vessel - - - 8-18-19-22-27 Dec 7-11-16 Jan 4-13-17-24 Feb 7-11 Mar 27 Apr 2-18-21-24-29 May 6-21-30 June 10-19 July 13-21-29-30 Aug 1-5-1919  
Total No. of visits 70.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 8-8-18 Slides 11-12-18 Covers 9-8-18 Pistons 11-12-18 Rods 2-9-18

Connecting rods 5-9-18 Crank shaft 5-9-18 Thrust shaft 2-9-18 Tunnel shafts 2-2-19 Screw shaft 10-9-18 Propeller 2-4-19

Stern tube 2-4-19 Steam pipes tested 30-7-19 Engine and boiler seatings 6-5-19 Engines holding down bolts 21-7-19

Completion of pumping arrangements 28-7-19 Boilers fixed 28-7-19 Engines tried under steam 1-8-19

Completion of fitting sea connections 6-5-19 Stern tube 30-5-19 Screw shaft and propeller 10-6-19

Main boiler safety valves adjusted 1-8-19 Thickness of adjusting washers Pt. Blr 5/16, 5/16, St. Blr 3/2, 3/2

Material of Crank shaft 1. Steel Identification Mark on Do. 305 Material of Thrust shaft 1. Steel Identification Mark on Do. 305

Material of Tunnel shafts 1. Steel Identification Marks on Do. 305 Material of Screw shafts 1. Steel Identification Marks on Do.

Material of Steam Pipes Steel Test pressure 600 lbs per sq inch

Is an installation fitted for burning oil fuel Yes 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 type" Standard.

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

The Machinery and Boilers of this vessel have been constructed under Special Survey and placed on board in accordance with the Society's Rules. They are in my opinion in safe working condition and respectfully submitted for the Certification + L.M.C. 8.19. in Register Book.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 8.19.

H.W.D. 22/8/19

ARR

The amount of Entry Fee ... £ 2 : 0 : When applied for,

Special ... £ 33 : 2 : 13th Aug 1919

Donkey Boiler Fee ... £ 2 : 10 : 0 19-9-19

Travelling Expenses (if any) £ 7 : 10 : 0 23-27-19 31/10/19 1919

Committee's Minute GLASGOW 19 AUG 1919

Assigned + L.M.C. 8.19

MACHINERY CERTIFICATE WRITTEN. 20/8/19

Graham Robertson.

Engineer Surveyor to Lloyd's Register of Shipping.



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