

## REPORT ON MACHINERY.

No. 27793

Received at London Office WED. APR 28 1920

Date of writing Report 19

When handed in at Local Office

27 APR 1920

Port of

SUNDERLAND.

No. in Survey held at Sunderland  
Reg. Book. 515 'KORANTON'  
on the

Date, First Survey

26 Aug 19

Last Survey 27 April 1920

(Number of Visits 28)

Gross 6695

Net 4122

Master A. Adams Built at Sunderland

By whom built Messrs Dorman &amp; Co (Sunderland)

When built 1920

Engines made at Sunderland

By whom made Messrs Dorman &amp; Co (Sunderland)

when made 1920

Boilers made at Sunderland

By whom made Messrs Dorman &amp; Co (Sunderland)

when made 1920

Registered Horse Power

Owners R. Chapman &amp; Co

Port belonging to Newcastle

Nom. Horse Power as per Section 28 596

Is Refrigerating Machinery fitted for cargo purposes 40

Is Electric Light fitted 40

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

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 27, 44, 70

Length of Stroke 48

Revs. per minute 78

Dia. of Screw shaft

as per rule 14.85

Material of screw shaft

Is the screw shaft fitted with a continuous liner the whole length of the stern tube 410

Is the after end of the liner made water tight

in the propeller boss 410 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 5-0 1/2

Dia. of Tunnel shaft

as per rule 13.32

Dia. of Crank shaft journals

as per rule 14

Dia. of Crank pin 14 1/2

Size of Crank webs 22 1/2 x 9

Dia. of thrust shaft under

collars 14 3/4

Dia. of screw 19-0

Pitch of Screw 17-0

No. of Blades 4

State whether moveable 410

Total surface 98.2

No. of Feed pumps 2

Diameter of ditto 4

Stroke 24

Can one be overhauled while the other is at work 410

No. of Bilge pumps 2

Diameter of ditto 4

Stroke 24

Can one be overhauled while the other is at work 410

No. of Donkey Engines 4

Sizes of Pumps 20 1/2 x 7 x 18

10 1/2 x 14 x 24

10 x 10 x 10

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

In Holds, &amp;c. Two in each hold 3 1/2, one in Tunnel

will 2 1/2

No. of Bilge Injections 1

sizes 13

Connected to condenser, or to circulating pump 410

Is a separate Donkey Suction fitted in Engine room &amp; size 410 3 1/2

Are all the bilge suction pipes fitted with roses 410

Are the roses in Engine room always accessible 410

Are the sluices on Engine room bulkheads always accessible 410

Are all connections with the sea direct on the skin of the ship 410

Are they Valves or Cocks 13 1/2

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates 410

Are the Discharge Pipes above or below the deep water line 410

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel 410

Are the Blow Off Cocks fitted with a spigot and brass covering plate 410

What pipes are carried through the bunkers 410

How are they protected

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times 410

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges 410

Is the Screw Shaft Tunnel watertight 410

Is it fitted with a watertight door 410

worked from upper platform

## BOILERS, &amp;c.—(Letter for record 5)

Manufacturers of Steel Spencer &amp; Sons

Total Heating Surface of Boilers 9525

Is Forced Draft fitted 410

No. and Description of Boilers Three single ended

Working Pressure 180 lbs

Tested by hydraulic pressure to 360 lbs

Date of test 23/12, 31/12/19, 9/1/20

No. of Certificate 3641, 3644, 3645

Can each boiler be worked separately 410

Area of fire grate in each boiler 72

No. and Description of Safety Valves to each boiler 2 spring valves

Area of each valve 12.5

Pressure to which they are adjusted 185 lbs

Are they fitted with easing gear 410

Smallest distance between boilers or uptakes and bunkers or woodwork 16-2 1/2

Mean dia. of boilers 16-2 1/2

Length 12-5

Material of shell plates S

Thickness 1 1/2

Range of tensile strength 28-33

Are the shell plates welded or flanged 410

Descrip. of riveting: cir. seams Lap 410

long. seams 1 1/2

Diameter of rivet holes in long. seams 1 3/8

Pitch of rivets 9 1/2

Lap of plates or width of butt straps 20 1/2

Per centages of strength of longitudinal joint rivets 88.5

plate 85.5

Working pressure of shell by rules 191

Size of manhole in shell 16 x 12

Size of compensating ring Flanged

No. and Description of Furnaces in each boiler 4 Diagonal

Material S

Outside diameter 3-7

Length of plain part top

bottom

Thickness of plates crown

bottom 3 1/2

Description of longitudinal joint welded

No. of strengthening rings

Working pressure of furnace by the rules 190

Combustion chamber plates: Material S

Thickness: Sides 23/32

Back 3/4

Top 23/32

Bottom 7/8

Pitch of stays to ditto: Sides 10 1/2 x 8 3/4

Back 9 1/2 x 7 3/4

Top 8 3/4 x 10 1/2

If stays are fitted with nuts or riveted heads 410

Working pressure by rules 198

Material of stays S

Area at smallest part 2.03

Area supported by each stay 68.75

Working pressure by rules 205

End plates in steam space:

Material S

Thickness 1 1/2

Pitch of stays 23 1/2 x 22 1/2

How are stays secured 410

Working pressure by rules 195

Material of stays S

Area at smallest part 9.66

Area supported by each stay 528

Working pressure by rules 199

Material of Front plates at bottom S

Thickness 3/2

Material of Lower back plate S

Thickness 7/8

Greatest pitch of stays 13 5/8

Working pressure of plate by rules 197

Diameter of tubes 7 1/2

Pitch of tubes 3 3/4 x 3 5/8

Material of tube plates S

Thickness: Front 3/2

Back 3/4

Mean pitch of stays 11 1/4 x 7 1/4

Pitch across wide water spaces 13 5/8

Working pressures by rules 180

Girders to Chamber tops: Material S

Depth and

thickness of girder at centre 10 1/2 x 1 3/4

Length as per rule 36 1/2

Distance apart 10 1/2

Number and pitch of stays in each 3, 8 3/2

Working pressure by rules 200

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

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

Valve

Pressure to which each is adjusted

Is Easing Gear fitted

W52-0142



IS A DONKEY BOILER FITTED?

NO

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Two top end, two bottom end connecting rod bolts and nuts, two main bearing bolts, one at coupling bolts, one at foot and high pump valves, several bolts and nuts, two various size four chuck valves, one propeller

The foregoing is a correct description,

WILLIAM DOXFORD & SONS, Limited

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1919 Aug 26 Sep 16-20-30 Oct 11-13-15-21-31 Nov 6-11-24-25 Dec 2-17-23-31 Jan 6-9-19-22 Feb 5-11 Mar 15-19-23-31 Apr 21  
During erection on board vessel --  
Total No. of visits (28) Is the approved plan of main boiler forwarded herewith 410

Dates of Examination of principal parts—Cylinders 30-10-19 Slides 25-11-19 Covers 15-10-19 Pistons 11-11-19 Rods 30-10-19

Connecting rods 30-10-19 Crank shaft 25-11-19 Thrust shaft 25-11-19 Tunnel shafts 6-11-19 Screw shaft 19-3-20 Propeller 23-3-20

Stern tube 1-2-20 Steam pipes tested 11-10-19 13-10-19 23-3-20 Engine and boiler seatings 19-1-20 Engines holding down bolts 23-3-20

Completion of pumping arrangements 30-3-20 Boilers fixed 30-3-20 Engines tried under steam 21-4-20

Completion of fitting sea connections 24-11-19 Stern tube 25-3-20 Screw shaft and propeller 30-3-20

Main boiler safety valves adjusted 21-4-20 Thickness of adjusting washers Put 13 1/2 x 7 1/2 S 13 1/2 Links 13 1/2 x 7 1/2 S 13 1/2 Shafts 13 1/2 x 7 1/2 S 13 1/2

Material of Crank shaft Steel Identification Mark on Do. 543 GAH Material of Thrust shaft Steel Identification Mark on Do. 543 GAH

Material of Tunnel shafts Steel Identification Marks on Do. 543 GAH Material of Screw shafts Steel Identification Marks on Do. 543 GAH

Material of Steam Pipes Copper Test pressure 360 lbs 9"

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 410 If so, state name of vessel Standard F Buirs, A Engines

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

The Machinery of this vessel has been built under special survey, the materials & workmanship are sound and good and under the vessel elipth in my opinion to have used 1st L.M.C. 4-20

It is submitted that this vessel is eligible for

1st L.M.C. 4-20 F.D

WEL 30/4/20

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