

REPORT ON MACHINERY

No. 32238

HU. OCT. 28 1920

Date of writing Report 26/10/20

When handed in at Local Office 27/10/20

Received at London Office

Port of Hull

No. in Survey held at Hull

Reg. Book.

Date, First Survey 11th Sept/20

Last Survey 25/Oct

1920

(Number of Visits 4)

on the S.C.K. CAVENDISH WILLIAM LEEK

Master

Built at S. Shields

By whom built J.P. Reynolds & Sons

Tons Gross 276

Net 123

When built 1918

Engines made at S. Shields

By whom made J.P. Reynolds & Sons

when made 1918

Boilers made at Hebburn-on-Tyne

By whom made Palmer, S. Blair & Co Ltd

when made 1918

Registered Horse Power 62

Owners East Riding Steam Towing Co Ltd

Port belonging to Hull

Nom. Horse Power as per Section 28 87

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted No

ENGINES, &c.—Description of Engines

Triple expansion

Dia. of Cylinders 12 1/2 x 21 x 35

Length of Stroke 26

Revs. per minute

No. of Cylinders three

No. of Cranks three

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

Dia. of Screw shaft as per rule 7 1/4

Material of screw shaft

in the propeller boss Yes If the liner is in more than one length are the joints burned

Is the after end of the liner made water tight

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

If the liner does not fit tightly at the part

liners are fitted, is the shaft lapped or protected between the liners

If two

Dia. of Tunnel shaft as per rule

Dia. of Crank shaft journals as per rule 6 9/4

Length of stern bush 2 1/2

collars 7 1/2

Dia. of screw 9 1/2

Pitch of Screw 11 1/2

Dia. of Crank pin 7 1/2

Size of Crank webs 4 1/2 x 10 1/2

Dia. of thrust shaft under

No. of Feed pumps Two

Diameter of ditto 2 1/2

Stroke 12

No. of Blades 4

State whether moveable No

Total surface 35 1/2

No. of Bilge pumps Two

Diameter of ditto 2 1/2

Stroke 12

Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 1/2

SIZES OF PUMPS 6 x 4 x 6 1/2 6 x 3 x 6

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

In Engine Room 1 - 2" For 1 - 2" Aft. & one 2" In Hold

In Holds, &c. one 2" Fore hold one 2" In Hold

No. of Bilge Injections one sizes 3 1/2

Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine room & size 4 1/2 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 Valves & Cocks

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 Hindman steam pump & suction

How are they protected Along with casing

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

OILERS, &c.—(Letter for record S)

Manufacturers of Steel

Total Heating Surface of Boilers 1619

Is Forced Draft fitted

No. and Description of Boilers one single ended multi-tube

Working Pressure 180 lbs

Tested by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately

Area of fire grate in each boiler 50

No. and Description of Safety Valves to

each boiler two spring loaded

Area of each valve 4 1/2

Pressure to which they are adjusted 180 lbs

Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 9"

Mean dia. of boilers 16 1/2

Length 10 1/2 Material of shell plates steel

Thickness 1 1/2

Range of tensile strength 28/32

Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams double

ong. seams T.R.D.B.S.

Diameter of rivet holes in long. seams 1 1/2

Pitch of rivets 8 1/2

Lap of plates or width of butt straps 17 1/2

Per centages of strength of longitudinal joint

rivets 89%

Working pressure of shell by rules 180 lbs

Size of manhole in shell 16 x 12

Size of compensating ring 7 1/2 x 1 1/2

No. and Description of Furnaces in each boiler 3 plain

Material steel Outside diameter 42

length of plain part top 7 1/2

bottom 5 1/2

Thickness of plates crown 2 1/2

Description of longitudinal joint welded

No. of strengthening rings

Working pressure of furnace by the rules 180

Combustion chamber plates: Material steel

Thickness: Sides 1 1/2

Back 3/4

Top 1 1/2

Bottom 1 1/2

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

Back 9 1/2 x 8 1/2

Top 9 1/2 x 9

If stays are fitted with nuts or riveted heads

Working pressure by rules 186 1/2

Material of stays steel

Area at smallest part 2 030

Area supported by each stay 87 1/2

Working pressure by rules 207

End plates in steam space:

Material steel

Thickness 1 1/2

Pitch of stays 18 1/2 x 18

How are stays secured DN & HS

Working pressure by rules 181

Material of stays steel

Area at smallest part 6 10

Area supported by each stay 3330

Working pressure by rules 188

Material of Front plates at bottom steel

Thickness 1 1/2

Material of Lower back plate steel

Thickness 1 1/2

Greatest pitch of stays 14 1/2 x 8 1/2

Working pressure of plate by rules 207

Diameter of tubes 3 1/2

Pitch of tubes 4 1/2 x 4 1/2

Material of tube plates steel

Thickness: Front 1 1/2

Back 3/4

Mean pitch of stays 9 1/2

Pitch across wide water spaces 14 1/2

Working pressures by rules 193

Girders to Chamber tops: Material steel

Depth and

Thickness of girder at centre 8 1/2 x 1 1/2

Length as per rule 32

Distance apart 9

Number and pitch of stays in each turn 9 1/2

Working pressure by rules 206

Steam dome: description of joint to shell

Material

Description of longitudinal joint

Diam. of rivet holes

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

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

Pressure to which each is adjusted

Is Easing Gear fitted

Date of Test

Diameter of Safety Valve

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IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles ^{on board} supplied:— *Two top & two bottom end bolts & nuts one set of coupling bolts & nuts, two main two main bearing bolts & nuts one set each air feed & bilge pump valves one safety valve spring 3 relief valve springs. Main & Donkey check valves 4 boiler tube stoppers 1 tube expander & 3 boiler tubes a quantity of assorted bolts nuts & iron*

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - }
{ During erection on board vessel - - }
Total No. of visits

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders *24/9/20* Slides *24/9/20* Covers *24/9/20* Pistons *24/9/20* Rods *24/9/20*

Connecting rods *24/9/20* Crank shaft *24/9/20* Thrust shaft *24/9/20* Tunnel shafts ☒ Screw shaft *24/9/20* Propeller *24/9/20*

Stern tube *24/9/20* Steam pipes tested ☒ Engine and boiler seatings *23/9/20* Engines holding down bolts *24/9/20*

Completion of pumping arrangements *13/10/20 24/9/20* Boilers fixed ☒ Engines tried under steam ☒

Completion of fitting sea connections ☒ Stern tube ☒ Screw shaft and propeller ☒

Main boiler safety valves adjusted *30/9/20* Thickness of adjusting washers *Pat $\frac{11}{32}$ Star $\frac{11}{32}$*

Material of Crank shaft ☒ Identification Mark on Do. ☒ Material of Thrust shaft ☒ Identification Mark on Do. ☒

Material of Tunnel shafts ☒ Identification Marks on Do. ☒ Material of Screw shafts ☒ Identification Marks on Do. ☒

Material of Steam Pipes *Copper* Test pressure ☒

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 ☒ If so, state name of vessel ☒

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

The machinery & boiler of this vessel were built to British Corporation Survey for the Admiralty.

The present Owner The East Riding Steam Fishing & L^d Hull (Hudson Bros Eng^s) requested that the machinery be surveyed with the view of being classed with Lloyd's Register of Shipping.

So far as could be ascertained from this examination the material & workmanship are good. The machinery is properly fitted & secured as far as can be seen, the safety valves adjusted under steam to a W.P. of 180 lbs.

In my opinion the vessel is eligible for the word of L.M.C. 10-20
NOTE. Tail shaft seen 10-20.

The amount of Entry Fee	... £	:	:	When applied for,
Special	... £	:	:	19.
Donkey Boiler Fee	... £	:	:	When received,
Travelling Expenses (if any)	£	:	:	19.

E. W. Wells

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. NOV. 45 1920*

Assigned

L.M.C. 1020

CERTIFICATE WRITTEN.



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Foundation