Rpt. 4.

REPORT ON MACHINERY.

No. 20,018

Port of Hull

Received at London Office WED. 6 MAY 1908

No. in Reg. Book. 499 Supp

Survey held at Hull Goole Date, first Survey June 5th 07 Last Survey 23rd April 1908 (Number of Visits 55)

on the Steel Sc K. Pintail

Master Built at Goole By whom built Goole S. B. & R. Co Ltd Tons Gross 199 Net 63 When built 1908

Engines made at Hull By whom made when made 1908

Boilers made at Hull By whom made Messrs Earles & Co Ltd when made 1908

Registered Horse Power Owners Kelsall Bros + Beeching Ltd Port belonging to Hull

Nom. Horse Power as per Section 28 55 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 12" ~ 21" ~ 33" Length of Stroke 21" Revs. per minute 105 Dia. of Screw shaft as per rule 6·7 as fitted 7·75 Material of screw shaft Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube No 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 ~~Spanish~~ 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 No Length of stern bush 35½"

Dia. of Tunnel shaft as per rule 5·714 as fitted 6·5 Dia. of Crank shaft journals as per rule 6· as fitted 6·5 Dia. of Crank pin 6·5 Size of Crank webs 12¼ × 4⅛" Dia. of thrust shaft under collars 6·5 Dia. of screw 8'~9" Pitch of Screw 9'~6" to 10'~6" No. of Blades 4 State whether moveable No Total surface 26 ☐f

No. of Feed pumps 1 Diameter of ditto 2½" Stroke 10" ~~Can one be overhauled while the other is at work~~

No. of Bilge pumps 1 Diameter of ditto 2½" Stroke 10" ~~Can one be overhauled while the other is at work~~

No. of Donkey Engines 1 Sizes of Pumps 4½" × 2¾" × 14" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room One 2" One 2½" In Holds, &c. One 2" to hold, Two 2" to tank and ejector suction from all parts.

No. of Bilge Injections 1 sizes 3½" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes 2½"

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 None

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 hold suction How are they protected wood + iron 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

Dates of examination of completion of fitting of Sea Connections 1·4·08 of Stern Tube 1·4·08 Screw shaft and Propeller 1·4·08

Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Beardmore Sons

Total Heating Surface of Boilers 900 ☐f Is Forced Draft fitted No No. and Description of Boilers 1 Cyl. Multi.

Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs Date of test 20·3·08 No. of Certificate 1639

~~Can each boiler be worked separately~~ Area of fire grate in ~~each~~ boiler 24½ ☐f No. and Description of Safety Valves to each boiler Two Spring Area of each valve 3·14 ☐" Pressure to which they are adjusted 165 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 12" Ex. ~~Mean~~ dia. of boilers 10'~6" Length 9'~6" Material of shell plates Steel

Thickness 27/32" Range of tensile strength 28·32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams L. D. long. seams D.B.S.D.R Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 5⅜" ~~Lap of plates or~~ width of butt straps 11½"

Per centages of strength of longitudinal joint rivets 86·7 plate 80·2 Working pressure of shell by rules 161 lbs Size of manhole in shell 16" × 12"

Size of compensating ring 30" × 28" × 27/32" No. and Description of Furnaces in ~~each~~ boiler Two plain Material Steel Outside diameter 2'~10"

Length of plain part top 6'~4½" bottom Thickness of plates crown 21/32" bottom 21/32" Description of longitudinal joint Welded No. of strengthening rings 0

Working pressure of furnace by the rules 176 lbs Combustion chamber plates: Material Steel Thickness: Sides 5/8" Back 21/32" Top 5/8" Bottom 5/8"

Pitch of stays to ditto: Sides 8½" × 8½" Back 10" × 9" Top 8½" × 7½" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 164 lbs

Material of stays Steel Diameter at smallest part 1½" Area supported by each stay 72·25 ☐" Working pressure by rules 195 lbs End plates in steam space:

Material Steel Thickness 7/8" Pitch of stays 15" × 15" How are stays secured D.N. Working pressure by rules 161 lbs Material of stays Steel

Diameter at smallest part 2 5/16" Area supported by each stay 225 ☐" Working pressure by rules 195 lbs Material of Front plates at bottom Steel

Thickness 7/8" Material of Lower back plate Steel Thickness 7/8" Greatest pitch of stays 14" × 9" Working pressure of plate by rules 191 lbs

Diameter of tubes 3" Pitch of tubes 4 5/8" × 4 3/8" Material of tube plates Steel Thickness: Front 7/8" Back 13/16" Mean pitch of stays 9"

Pitch across wide water spaces 14" Working pressures by rules 160 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 7¼" × 1½" Length as per rule 2'~2" Distance apart 7½" Number and pitch of stays in each Two 8½"

Working pressure by rules 246 lbs 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 rivet holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness If 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 easing gear

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No. Description

Made at By whom made When made Where fixed

Working pressure tested by hydraulic pressure to Date of test No. of Certificate Fire grate area Description of Safety Valves No. of Safety Valves Area of each Pressure to which they are adjusted Date of adjustment

If fitted with easing gear If steam from main boilers can enter the donkey boiler Dia. of donkey boiler Length

Material of shell plates Thickness Range of tensile strength Descrip. of riveting long. seams

Dia. of rivet holes Whether punched or drilled Pitch of rivets Lap of plating Per centage of strength of joint Rivets Plates

Working pressure of shell by rules Thickness of shell crown plates Radius of do. No. of stays to do. Dia. of stays

Diameter of furnace Top Bottom Length of furnace Thickness of furnace plates Description of joint

Working pressure of furnace by rules Thickness of furnace crown plates Stayed by

Diameter of uptake Thickness of uptake plates Thickness of water tubes Dates of survey

SPARE GEAR. State the articles supplied :— Two each top and bottom end connecting rod bolts and nuts, two main bearing bolts and nuts, one set coupling bolts and nuts, one set each air and circulating pumps and valves, and a quantity of assorted bolts nuts etc

The foregoing is a correct description,

F. J. Taylethorpe Manufacturer.

SECRETARY

Dates of Survey while building

During progress of work in shops— 1907:- June 5. 12. 17. 19. 22. 26. 29. July 4. 8. 17. 23. 30. Aug 20. 23. 30. Sept 4. 9. 12. 19. 24. Oct 4.

During erection on board vessel — Oct 18. 28. Nov 1. 26. 27 Dec 4. 13. 16. 1908:- Jan 6. 14. 21. 27. Feb 4. 6. 10. 19. 25. Mar 2. 9. 12. 17. 19. 20. 25. 30. April 1. 6. 8. 15. 24. 26. 27. 21. 23.

Total No. of visits 55

Is the approved plan of main boiler forwarded herewith No

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 14.1.08 Slides 2.3.08 Covers 19.9.07 Pistons 12.9.07 Rods 19.9.07

Connecting rods 19.9.07 Crank shaft 6.2.08 Thrust shaft 9.3.08 ~~Tunnel shafts~~ Screw shaft 1.4.08 Propeller 1.4.08

Stern tube 1.4.08 Steam pipes tested 6.4.08 Engine and boiler seatings 1.4.08 Engines holding down bolts 8.4.08

Completion of pumping arrangements 23.4.08 Boilers fixed 8.4.08 Engines tried under steam 23.4.08

Main boiler safety valves adjusted 23.4.08 Thickness of adjusting washers 11/32" 12/32"

Material of Crank shaft Steel Identification Mark on Do. 1970. ATG Material of Thrust shaft Steel Identification Mark on Do. 111 GAH

~~Material of Tunnel shafts~~ ~~Identification Marks on Do.~~ Material of Screw shafts Steel Identification Marks on Do. 111 GAH

Material of Steam Pipes Solid drawn Copper Test pressure 400 lbs

General Remarks (State quality of workmanship, opinions as to class, &c. The engines & boiler of this vessel have been constructed under special survey, in accordance with the Rules, the materials and workmanship are sound and good. The boiler tested by hydraulic pressure, and with the engines placed on board and tested under steam, they are now in good order and safe working condition and respectfully submitted as being eligible in my opinion to be classed with the notation of ✠ L M 6.08 in the Register Book.

These engines and boiler of this vessel are similar to those fitted on the Mastwing" Hull Report No 19967.

It is submitted that this vessel is eligible for THE RECORD +LMC.4.08.

J.W.R. 6/5/08

M.S. 6.5.08

James Barclay

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee..	£ 1 : :	When applied for, 5-5- 1908	
Special	£ 8 . 5 :		
Donkey Boiler Fee	£ : :	When received, 7-7-08	
Travelling Expenses (if any)	£ . : 6 : 4		

8/7/08

Committee's Minute FRI. 8 MAY 1908

Assigned + Lmc 4.08

MACHINERY CERTIFICATE WRITTER.

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

Certificate (if required) to be sent to Hull

Write 'Sheer Strake' opposite its corresponding letter.