Rpt. 4.

REPORT ON MACHINERY.

Mdb No. 4001
Lon – 66,800
Hull No 1654 2

Port of MIDDLESBROUGH-ON-TEES.

Received at London Office THUR. 10 NOV 1904

No. in Reg. Book. 63 Sup. Survey held at Stockton & Date, first Survey 19th July Last Survey 25th Oct. 1904 (Number of Visits 11)

on the Steam Trawler "Argosy". Tons Gross 406 Net 168

Master Built at Hessle – Hull By whom built T. Dobson & Co When built 1905

Engines made at Yarmouth By whom made Crabtree & Co's when made 1904

Boilers made at Stockton By whom made Riley Bros Ltd No 3432. when made 1904

Registered Horse Power Owners Argosy S. S. Co's., Port belonging to London

Nom. Horse Power as per Section 28 73 Is Refrigerating Machinery fitted ✓ Is Electric Light fitted ✓

ENGINES, &c.—Description of Engines See Lon Rpt. No. 66,800. No. of Cylinders No. of Cranks

Dia. of Cylinders Length of Stroke Revs. per minute Dia. of Screw shaft as per rule / as fitted Material of screw shaft

Is the screw shaft fitted with a continuous liner the whole length of the stern tube Is the after end of the liner made water tight in the propeller boss 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

Dia. of Tunnel shaft as per rule / as fitted Dia. of Crank shaft journals as per rule / as fitted Dia. of Crank pin Size of Crank webs Dia. of thrust shaft under collars Dia. of screw Pitch of screw No. of blades State whether moveable Total surface

No. of Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work

No. of Bilge pumps Diameter of ditto Stroke Can one be overhauled while the other is at work

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

In Engine Room In Holds, &c.

No. of bilge injections sizes Connected to condenser, or to circulating pump Is a separate donkey suction fitted in Engine room & size

Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the discharge pipes above or below the deep water line

Are they each fitted with a discharge valve always accessible on the plating of the vessel Are the blow off cocks fitted with a spigot and brass covering plate

What pipes are carried through the bunkers How are they protected

Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges

When were stern tube, propeller, screw shaft, and all connections examined in dry dock Is the screw shaft tunnel watertight

Is it fitted with a watertight door worked from

BOILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 1280 ☐ft Is forced draft fitted No

No. and Description of Boilers One Cyl Multitubular Working Pressure 180 lb Tested by hydraulic pressure to 360 lb

Date of test 28-10-04 Can each boiler be worked separately – Area of fire grate in each boiler 40.6 ☐ft No. and Description of safety valves to each boiler Two direct spring Area of each valve 4·9 ☐in Pressure to which they are adjusted 182 lbs Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 6'-4" Mean dia. of boilers 12'-3" Length 10'-3" Material of shell plates Steel

Thickness 1 1/32" Range of tensile strength 28/32 Are they welded or flanged No Descrip. of riveting: cir. seams Lap & Rivt long. seams D Butt Strap

Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 1 row 7 3/8" Two 3 11/16" ~~Lap of plates~~ or width of butt straps 16"

Per centages of strength of longitudinal joint rivets 87.2 plate 85.6 Working pressure of shell by rules 183 lb Size of manhole in shell 16" x 12"

Size of compensating ring 7 1/2" x 1 1/32" No. and Description of Furnaces in each boiler 2 Deighton Patent Material Steel Outside diameter 3'-1 1/2"

Length of plain part top / bottom 6'-2" Thickness of plates crown / bottom 9/16" Description of longitudinal joint Welded No. of strengthening rings –

Working pressure of furnace by the rules 185 lb Combustion chamber plates: Material Steel Thickness: Sides 5/8" Back 21/32" Top 19/32" Bottom 3/4"

Pitch of stays to ditto: Sides 8" x 9 1/8" Back 9" x 9" Top 8" x 8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 183 lb

Material of stays Steel Diameter at smallest part 1 1/2" + 1 5/8" Area supported by each stay 81 ☐in Working pressure by rules 230 lb End plates in steam space:

Material Steel Thickness 1 1/16" Pitch of stays 16" x 16" How are stays secured N & W Working pressure by rules 234 lb Material of stays Steel

Diameter at smallest part 2 1/2" Area supported by each stay 256 ☐in Working pressure by rules 191 lb Material of Front plates at bottom Steel

Thickness 29/32" Material of Lower back plate Steel Thickness 25/32" Greatest pitch of stays 12" x 9" Working pressure of plate by rules 218 lb

Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" Material of tube plates Steel Thickness: Front 29/32" Back 3/4" Mean pitch of stays 9"

Pitch across wide water spaces 14 1/4" Working pressures by rules 271 lb Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 8" x 1 1/2" Length as per rule 2'-6" Distance apart 8" Number and pitch of Stays in each Two 8"

Working pressure by rules 180 lb 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 –

DONKEY BOILER— No. Description

Made at By whom made When made Where fixed

Working pressure tested by hydraulic pressure to No. of Certificate Fire grate area Description of safety valves

No. of safety valves Area of each Pressure to which they are adjusted 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 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 Thickness of furnace crown plates Stayed by Working pressure of shell by rules

Working pressure of furnace by rules Diameter of uptake Thickness of uptake plates Thickness of water tubes

SPARE GEAR. State the articles supplied :—

FOR The foregoing is a correct description,
RILEY BROS. (BOILERMAKERS) LIMITED.
Manufacturer. of main boiler.
A Lund SECRETARY.

Dates of Survey while building:
- During progress of work in shops - - 1904 July 19. Sept. 6. 8. 12. 19. 24. 29 Octr. 13. 14. 24. 28
- During erection on board vessel - -
- Total No. of visits Eleven

Is the approved plan of main boiler forwarded herewith Yes
" " " donkey " " "

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

The boiler for this Vessel has been constructed under Special Survey, the materials and workmanship are good and efficient, and when tested with hydraulic pressure was found tight & satisfactory.
The boiler has been sent away to Hull, to be fitted on board the vessel building at Hessle, near Hull.
For identification it has been stamped as below.

This boiler has now been fitted and secured on board in accordance with the Rules.

No. 3333.
LLOYD'S TEST.
360 lbs.
G.A.M.
28-10-04

Certificate (if required) to be sent to

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

The amount of Entry Fee . .	£	:	:	When applied for, 8. 11. 1904
Special	£	:	:	
~~Donkey~~ Boiler Fee . .	£	3 :	3 : 0	When received, 11/11/1904
Travelling Expenses (if any)	£	:	:	

Geo A Milne & J Kerr
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute TUES. 7 FEB 1905 8 Feb 05 [illegible]

Assigned