

REPORT ON MACHINERY.

No. 26190
TUES. 28 JAN 1908

Received at London Office

Date of writing Report 25.1.1908 When handed in at Local Office 27.1.1908 Port of Glasgow.

No. in Survey held at Coatbridge N.B. Date, First Survey 21.10.07 Last Survey 20.1.1908
Reg. Book. on the Steam Trawler "Arden" (Number of Visits 13)

Master Built at Goole By whom built Goole S. B. Co. (No 112) Tons } Gross
Net

Engines made at Coatbridge N.B. By whom made W. V. V. Lidgerwood Esq. (No 282) when made 1907 & 1908.

Boilers made at Hartlepool. By whom made Richardson Westgarth (No 3189) when made 1907 & 1908.

Registered Horse Power Owners Port belonging to

Reg. Horse Power as per Section 2 70.0 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 12" x 20" x 33" Length of Stroke 24" Revs. per minute Dia. of Screw shaft as per rule 6.92" Material of screw shaft iron

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

the propeller boss yes If the liner is in more than one length are the joints burned If the liner does not fit tightly at the part

tween 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 2'-6"

Dia. of Tunnel shaft as per rule none Dia. of Crank shaft journals as per rule 6.5" Dia. of Crank pin 6 3/4" Size of Crank webs 4 1/2" Dia. of thrust shaft under

rollers 6 3/4" Dia. of screw 8'-6" Pitch of Screw 11'-6" No. of Blades 4 State whether moveable No Total surface 31 ft

No. of Feed pumps 1 Diameter of ditto 2 1/2" Stroke 12" Can one be overhauled while the other is at work

No. of Bilge pumps 1 Diameter of ditto 2 1/2" Stroke 12" Can one be overhauled while the other is at work

No. of Donkey Engines 2 Sizes of Pumps 5 1/4" x 3 1/2" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 2-2' In Holds, &c. 2-2 1/2'

No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size yes 2'

Are all the bilge suction pipes fitted with roses yes 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 yes Are they Valves or Cocks Both 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 yes

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

How are they protected wood 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 6. Feb 08 of Stern Tube 6 Feb 08 Screw shaft and Propeller 6 Feb 08

Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record) Manufacturers of Steel particulars of Boilers appended with plan

Total Heating Surface of Boilers 1245 ft Is Forced Draft fitted No. and Description of Boilers 1 Single Ended Marine

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 16.12.07 No. of Certificate 4066

Can each boiler be worked separately Area of fire grate in each boiler 41 ft No. and Description of Safety Valves to

each boiler Double Spring loaded Area of each valve 4.9 sq Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 10 Mean dia. of boilers Length Material of shell plates

Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

Long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Percentages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell

Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space:

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

Thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each

Working pressure by rules 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

Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

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

W1255-0036

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 _____

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 connecting rod top end & 2 bottom end bolts & nuts. Main bearing bolts & nuts. 1 set coupling bolts. 1 set each of fuel & bilge pump valves. quantity of assorted bolts & nuts, & iron of various sizes.*

The foregoing is a correct description,

For *W. V. V. Lidgenwood* Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1907 Oct 21, 31 Nov 12, 14, 21, 29 Dec 4, 9, 18, 20, 29 1908 Jan 9, 20
During erection on board vessel - - *Dec. 1, 3, 4, 5, 6, 7, 9.*
Total No. of visits *18 19.*

Is the approved plan of main boiler forwarded herewith _____

Dates of Examination of principal parts—Cylinders *31.10.07* Slides *31.10.07* Covers *21.11.07* Pistons *21.11.07* Rods *29.11.*
Connecting rods *29.11.07* Crank shaft *29.11.07* Thrust shaft *16.1.08* Tunnel shafts *✓* Screw shaft *16.1.08* Propeller *16.1.*
Stern tube *16.1.08* Steam pipes tested *7 Feb 08* Engine and boiler seatings *4 Feb 08* Engines holding down bolts *4 Feb*
Completion of pumping arrangements _____ Boilers fixed *4 Feb 08* Engines tried under steam *9 Feb 08*
Main boiler safety valves adjusted *9 Feb 08* Thickness of adjusting washers *DUR 7/16 SUR 1 1/2*
Material of Crank shaft *Steel* Identification Mark on Do. *282* Material of Thrust shaft *Steel* Identification Mark on Do. *282*
Material of Tunnel shafts *None* Identification Marks on Do. *✓* Material of Screw shafts *iron* Identification Marks on Do. *28.*
Material of Steam Pipes *Copper* Test pressure *360 lbs per sq. in. at Bilton & Jiah*

General Remarks (State quality of workmanship, opinions as to class, &c. *These Engines have been built under Special Survey. The workmanship & materials are of good quality, & when they have been satisfactorily fitted on board, & tried under steam, they will in opinion be eligible for the L.M.C notation with date of completion. 28.11.08 The engines have been forwarded to North Shields to be fitted on board. The machinery placed on board at Middlesbrough. Fitting out completed at North Shields. The hold & Tank suction pipes remain to be fitted to be done at Govle. Surveyor advised by letter. See Hull Surveyor's letter dated 9.3.08. C.H.*

It is submitted that this vessel is eligible for THE RECORD. L.M.C 208

Fee { 3.10.0 due 26.
3.10.0 due 27.
3.10.0 due 28. charges by them
£ 11.10.0

J. R. R.
10.3.08

The amount of Entry Fee... £ *1 : 0 : 0* When applied for, *27/11/08*
Special ... £ *7 : 0 : 0*
Donkey Boiler Fee ... £ *7 : 0 : 0* When received, *27.11.08*
Travelling Expenses (if any) £ *3.10.0*

Committee's Minute *Glasgow* 27 JAN 1908

Assigned *Deferred for compl.*

Leonard & Shaller
C. H. Pilditch,
Engineer Surveyor to Lloyd's Register of British & Foreign Ships

FRI. 13 MAR 1908

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