

REPORT ON MACHINERY.

No. 14538.

Received at London Office

THU. FEB. 13. 1913

Survey Report 19. 11. 1912 When handed in at Local Office 20. 11. 1912 Port of West Hartlepool
Survey held at West Hartlepool Date, First Survey 4th January Last Survey 15th November 1912
on the steel screw steamer "TIME" (Number of Visits 62)

Gross 3316
Tons Net 1746
When built 1912

Brew Built at Sunderland By whom built J. Priestman & Co.

made at Hartlepool By whom made Richardsons, Westgate & Co. Ltd. when made 1912

made at Hartlepool By whom made Richardsons, Westgate & Co. Ltd. when made 1912

ed Horse Power Owners Howard Smith & Co. Ltd. Port belonging to Melbourne

orse Power as per Section 28 442 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted yes

ES, &c.—Description of Engines Quadruple Expansion No. of Cylinders four No. of Cranks four

Cylinders 24, 34, 48, 69 Length of Stroke 45 Revs. per minute 75 Dia. of Screw shaft 13.28 as per rule 13.28 as fitted 13.28 Material of Virgin Iron

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

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

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

are fitted, is the shaft lapped or protected between the liners Length of stern bush 5-0 1/2

Tunnel shaft as per rule 12.35 Dia. of Crank shaft journals as per rule 13.28 Dia. of Crank pin 14 Size of Crank webs 21 3/8 x 8 1/2 Dia. of thrust shaft under

14 1/2 Dia. of screw 16-0 Pitch of Screw 18-0 No. of Blades four State whether moveable no Total surface 88 1/2

Feed pumps two Diameter of ditto 4 Stroke 24 Can one be overhauled while the other is at work yes

Bilge pumps two Diameter of ditto 4 Stroke 24 Can one be overhauled while the other is at work yes

Donkey Engines three Sizes of Pumps two Bellows Engine 8 x 8 inch 5 x 10 No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room four one 3 1/2 tunnel well. In Holds, &c. Eight 3" No. 1 hole, 2 @ 3"

2 hole, 2 @ 3", No. 3 hole, 2 @ 3", No. 4 hole, 2 @ 3"

Bilge Injections all sizes 4 1/2 Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size yes 3 1/2

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

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

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

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

at pipes are carried through the bunkers none How are they protected

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

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

es of examination of completion of fitting of Sea Connections 18.7.12 of Stern Tube 18.7.12 Screw shaft and Propeller 18/10/12

he Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top platform

ERS, &c.—(Letter for record S) Manufacturers of Steel J. Speedier & Son Ltd, Leeds for J. & C. Ltd.

al Heating Surface of Boilers 7619 1/2 Is Forced Draft fitted no No. and Description of Boilers three single Ended Multitubular

orking Pressure 215 lb. Tested by hydraulic pressure to 430 lb. Date of test 12/6/12 No. of Certificate 3284

a each boiler be worked separately yes Area of fire grate in each boiler 63.25 No. and Description of Safety Valves to

h boiler two direct spring Area of each valve 4.04 Pressure to which they are adjusted 220 lb. Are they fitted with easing gear yes

allest distance between boilers or uptakes and bunkers or woodwork 24 Radius dia. of boilers 16-0 Length 11-0 Material of shell plates steel

ickness 1 1/2 Range of tensile strength 31 to 34 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams yes 5 R.

g. seams 5 R. S-T R Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 10 3/8 Lap of plates or width of butt straps 23 1/8

er centages of strength of longitudinal joint rivets 90.2% Working pressure of shell by rules 215 lb. Size of manhole in shell 13 x 16 1/2

se of compensating ring 8 3/4 x 1 1/2 No. and Description of Furnaces in each boiler three-Bulb Material steel (Outside diameter 4 7/8)

ength of plain part top 11 Thickness of plates crown 11 Description of longitudinal joint Welded No. of strengthening rings —

orking pressure of furnace by the rules 239 lb. Combustion chamber plates: Material steel Thickness: Sides 21 Back 21 Top 21 Bottom 13 1/2

itch of stays to ditto: Sides 7 7/8 x 8 1/4 Back 7 1/2 x 8 Top 7 7/8 x 8 1/4 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 228 lb.

aterial of stays steel Diameter at smallest part 1 1/2 Area supported by each stay 7 7/8 x 8 1/4 Working pressure by rules 217.5 lb. End plates in steam space:

aterial steel Thickness 1 1/4 Pitch of stays 18 1/4 x 1 1/4 How are stays secured D.N. Working pressure by rules 225 lb. Material of stays steel

diameter at smallest part 3 5/8 Area supported by each stay 18 1/4 x 1 1/4 Working pressure by rules 262 lb. Material of Front plates at bottom steel

Thickness 29 Material of Lower back plate steel Thickness 7/8 Greatest pitch of stays 13 1/2 x 8 Working pressure of plate by rules 215 lb.

diameter of tubes 3 1/2 Pitch of tubes 4 3/4 x 4 5/8 Material of tube plates steel Thickness: Front 1 3/2 Back 31 Mean pitch of stays 11 1/8 x 9 1/4

itch across wide water spaces 14 1/2 Working pressures by rules 218 lb. Girders to Chamber tops: Material steel Depth and

ickness of girder at centre 9 5/8 x 1 3/4 Length as per rule 2-10 Distance apart 8 1/4 Number and pitch of stays in each three 7/8

Working pressure by rules 219 lb. Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

eparately — Diameter — Length — Thickness of shell plates — Material — Description of longitudinal joint — Diam. of rivet

oles — Pitch of rivets — Working pressure of shell by rules — Diameter of flue — Material of flue plates — Thickness — How stayed

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

W1030-0041

VERTICAL DONKEY BOILER—

No. _____ Description _____ Manufacturers of Steel *No. Donkey Boiler*

Made at _____ By whom made _____

Working pressure _____ tested by hydraulic pressure to _____ Date of test _____ When made _____ Where fixed _____

Valves _____ No. of Safety Valves _____ Area of each _____ No. of Certificate _____ Fire grate area _____ Description _____

If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____ Pressure to which they are adjusted _____ Date of adjustment _____

Material of shell plates _____ Thickness _____ Range of tensile strength _____ Dia. of donkey boiler _____ Length _____

Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Descrip. of riveting long. seams _____

Working pressure of shell by rules _____ Thickness of shell crown plates _____ Lap of plating _____ Per centage of strength of joint _____ Rivets _____

Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____ Plates _____

Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Thickness of furnace plates _____ Description of joint _____

Diameter of uptake _____ Thickness of uptake plates _____ Stayed by _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— *Two top end bolts & nuts, two bottom end bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set of feed & helix pump valves, one set of H.P. & one set of M.P. piston rings, one set of one pair crank pin bushes, two pair top end bushes, one screw pump bucket & rod & head valve, 1/2 crank shaft & lost motion pin & propeller shaft, assorted bolts & nuts & screws*

The foregoing is a correct description,

FOR RICHARDSONS, WESTGARTH & CO. LIMITED.

Manufacturer.

L. J. M. J. M. J. M.

ASSISTANT GENERAL MANAGER

Dates of Survey while building
 During progress of work in shops— *1912 Jan. 4, 9, 11, 15, 22, 31, Feb. 1, 14, 26, 28, Mar. 1, 4, 5, 6, 8, 11, 12, 13, 14, 25, 27, 29, Apr. 1, 2, 26, May 1, 3, 9, 14, 16, 20, 23, 24, 30, 31, June 1, 12, 14, 17, 19, 27, July 1, 2, 3, 11, 12, 15, 16, 17, 18, Oct. 18, 21, 22, 23, 28, Nov. 4, 6, 9, 12, 15, Dec. 5, 18, Jan. 6, 24, 31, Feb. 3, 6*
 During erection on board vessel—
 Total No. of visits *69*

Is the approved plan of main boiler forwarded herewith *Yes*

Dates of Examination of principal parts—
 Cylinders *28/4/12* Slides *19/5/12* Covers *8/5/12* Pistons *9/5/12* Rods *14/5/12*
 Connecting rods *28/4/12* Crank shaft *27/5/12* Thrust shaft *12/6/12* Tunnel shafts *19/4/12* Screw shaft *7/6/12* Propeller *11/4/12*
 Stern tube *19/6/12* Steam pipes tested *19/6/12* Engine and boiler seatings *6/11/12* Engines holding down bolts *23/10/12*
 Completion of pumping arrangements *15/11/12* Boilers fixed *6/11/12* Engines tried under steam *12/11/12*
 Main boiler safety valves adjusted *12/11/12* Thickness of adjusting washers *2 1/2, 3 1/2, 4 1/2, 5 1/2, 6 1/2, 7 1/2, 8 1/2, 9 1/2, 10 1/2, 11 1/2, 12 1/2, 13 1/2, 14 1/2, 15 1/2, 16 1/2, 17 1/2, 18 1/2, 19 1/2, 20 1/2, 21 1/2, 22 1/2, 23 1/2, 24 1/2, 25 1/2, 26 1/2, 27 1/2, 28 1/2, 29 1/2, 30 1/2, 31 1/2, 32 1/2, 33 1/2, 34 1/2, 35 1/2, 36 1/2, 37 1/2, 38 1/2, 39 1/2, 40 1/2, 41 1/2, 42 1/2, 43 1/2, 44 1/2, 45 1/2, 46 1/2, 47 1/2, 48 1/2, 49 1/2, 50 1/2, 51 1/2, 52 1/2, 53 1/2, 54 1/2, 55 1/2, 56 1/2, 57 1/2, 58 1/2, 59 1/2, 60 1/2, 61 1/2, 62 1/2, 63 1/2, 64 1/2, 65 1/2, 66 1/2, 67 1/2, 68 1/2, 69 1/2, 70 1/2, 71 1/2, 72 1/2, 73 1/2, 74 1/2, 75 1/2, 76 1/2, 77 1/2, 78 1/2, 79 1/2, 80 1/2, 81 1/2, 82 1/2, 83 1/2, 84 1/2, 85 1/2, 86 1/2, 87 1/2, 88 1/2, 89 1/2, 90 1/2, 91 1/2, 92 1/2, 93 1/2, 94 1/2, 95 1/2, 96 1/2, 97 1/2, 98 1/2, 99 1/2, 100 1/2*
 Material of Crank shaft *steel* Identification Mark on Do. *(5243)* Material of Thrust shaft *steel* Identification Mark on Do. *(5243)*
 Material of Tunnel shafts *steel* Identification Marks on Do. *(5243)* Material of Screw shafts *steel* Identification Marks on Do. *(5243)*
 Material of Steam Pipes *Lapwelded mild iron* Test pressure *645 lb.*

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

15 The Engine & Boiler tested to 50 lbs. & down to 430 lbs. pressure, Marked 116255, 116256, 116257, 116258, 116259, 116260, 116261, 116262, 116263, 116264, 116265, 116266, 116267, 116268, 116269, 116270, 116271, 116272, 116273, 116274, 116275, 116276, 116277, 116278, 116279, 116280, 116281, 116282, 116283, 116284, 116285, 116286, 116287, 116288, 116289, 116290, 116291, 116292, 116293, 116294, 116295, 116296, 116297, 116298, 116299, 116300, 116301, 116302, 116303, 116304, 116305, 116306, 116307, 116308, 116309, 116310, 116311, 116312, 116313, 116314, 116315, 116316, 116317, 116318, 116319, 116320, 116321, 116322, 116323, 116324, 116325, 116326, 116327, 116328, 116329, 116330, 116331, 116332, 116333, 116334, 116335, 116336, 116337, 116338, 116339, 116340, 116341, 116342, 116343, 116344, 116345, 116346, 116347, 116348, 116349, 116350, 116351, 116352, 116353, 116354, 116355, 116356, 116357, 116358, 116359, 116360, 116361, 116362, 116363, 116364, 116365, 116366, 116367, 116368, 116369, 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