

REPORT ON MACHINERY.

No. 7528

Received at London Office MAY 31 1915

of writing report 29th May 1915 When handed in at Local Office 29th May 1915 Port of Belfast

in Survey held at Belfast Date, First Survey 30th Nov 1914 Last Survey 26th May 1915

g. Book. on the Twin Screw Monitor "Admiral Farragut" (Number of Visits) 2

Registered Built at Belfast By whom built Harland & Wolff Ltd. Net Displacement 10000 Tons

Engines made at Belfast By whom made when made -

Motors made at Glasgow By whom made Babcock & Wilcox Ltd. when made -

Registered Horse Power Owners The Admiralty when made -

Net Horse Power as per Section 28 437 Port belonging to ✓

Is Refrigerating Machinery fitted for cargo purposes ✓ Is Electric Light fitted Yes

GINES, &c.—Description of Engines Twin Screw Quadruple Expansion Cylinders 8 No. of Cranks 8

Length of Stroke 28" Revs. per minute 170 Dia. of Screw shaft as per rule 8.13" Material of screw shaft I. Steel

the screw shaft fitted with a continuous liner the whole length of the stern tube No liners Is the after end of the liner made water tight

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

in 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 4'-0"

of Tunnel shaft as per rule 7.24" Dia. of Crank shaft journals as per rule 7.6" with 2" hole 8 1/2" Size of Crank webs 2' x 5 1/2" dia. of thrust shaft under

as fitted 7.75" Dia. of screw 7'-6" Pitch of Screw 8'-6" No. of Blades 3 - State whether moveable No Total surface 22 sq. ft.

of Feed pumps None diam. of Main Engines one be overhauled while the other is at work ✓

of Bilge pumps Diameter of ditto - Stroke - Can one be overhauled while the other is at work ✓

of Donkey Engines 2 Feed + 2 Bilge Sizes of Pumps Feed 13 1/2 x 9 x 21" No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 2-2", 1-3 1/2", 4-3" In Holds, &c. 14-6" and 1-4"

of Bilge Injections 2 sizes 8" Connected to condenser, or to circulating pumps ✓ Is a separate Donkey Suction fitted in Engine room & size 1-3 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 ✓

all connections with the sea direct on the skin of the ship Fitted to ex. steel tubes Are the 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 Below

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 Yes Fitted to metal tubes

of pipes are carried through the bunkers ✓ 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 No - Bilges can be flooded for tactical purposes

of examination of completion of fitting of Sea Connections of Stern Tube Screw shaft and Propeller

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

ERS, &c.—(Letter for record) Manufacturers of Steel

Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers

Working Pressure Tested by hydraulic pressure to Date of test No. of Certificate

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

Boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

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

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

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

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

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

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

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

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

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

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

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

Material 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

strengthened 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 _____
 Working pressure _____ tested by hydraulic pressure to _____ Date of test _____ When made _____ Where fixed _____
 Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____
 If fitted with casing gear _____ If steam from main boilers can enter the donkey boiler _____ Dia. of donkey boiler _____
 Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long. seams _____ Length _____
 Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____ Rivets _____
 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 _____ Radius of do. _____ Stayed by _____
 Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— See sheets appended. ✓

The foregoing is a correct description, J.H. Harland & Wolff Ltd.
 Manufacturer. *Harland & Wolff*

Dates of Survey: During progress of work in shops — 1914: Nov 30, Dec 1, 3, 7, 8, 9, 10, 11, 17, 17, 23, 30, 1915: Jan 1, 11, 18, 18, 19
 During erection on board vessel — 21, 22, 25, 27, 29, Feb 2, 4, 5, 10, 11, 12, 13, Aug 5, 26 May 1915
 Total No. of visits 76

Is the approved plan of main boiler forwarded herewith No

Dates of Examination of principal parts—Cylinders 30—Sheds 15 " " " donkey " " "
 Connecting Rods 2-15 Crank shaft 23-1 Thrust shaft Tunnel shafts 5 Pistons Rods
 Stern tube 20-1-15 Steam pipes tested 23-3-15 Engine and boiler seatings 29-3-15 Engines holding down bolts 29-3-
 Completion of pumping arrangements 19-5-15 Boilers fixed 29-3-15 Engines tried under steam 17-4-15
 Main boiler safety valves adjusted 17-4-15 Thickness of adjusting washers 7-12
 Material of Crank shafts *Steel* Identification Mark on Do. *LL0YDS* Material of Thrust shaft *Do* Identification Mark on Do. *Do*
 Material of Tunnel shafts *Do* Identification Marks on Do. *1-3-15* Material of Screw shafts *Do* Identification Marks on Do. *Do*
 Material of Steam Pipes *Steel* ✓ Test pressure 600 lb + 8 ✓

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

The machinery of this vessel has been constructed under Special Survey, and in accordance with the Rules. The workmanship and the materials are of good description throughout. It has been checked with the Builders Specification enclosed with Secretary's Letter of 27th February 1915, and found to comply with it. On the official trial in Belfast Lough, the propelling machinery worked satisfactorily, and in my opinion merits the approval of the Committee for L.M.C. 5-15. The auxiliary machinery was found to work well generally, but in regard to the Electric generating plant, which vessels lighting tests were satisfactory, the full load on dynamo was not applied, owing to the gun turret not being ready for testing. The steam steering engine was found to work satisfactorily at the full speed of the vessel, up to about 15° to 20° angle of the rudders, but beyond that angle the engine power seemed to be insufficient.

The amount of Entry Fee £ 50. 0. 0
 Special Donkey Boiler Fee £ 50. 0. 0
 Travelling Expenses (if any) £ _____
 When applied for, 29-5-1915
 When received, 19/6/15

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

Committee's Minute FIN. 24 FEB 1915

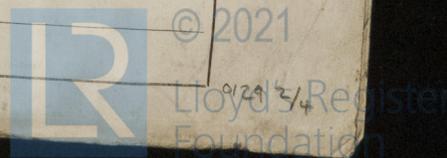
Assigned See Sak. 470

Rpt. 9a.

Port of Belfast Continuation of Report No. 7528 dated 29th May 1915 on the T.S.S. Admiral Farragut

The stops on the Bridge and Conning Tower steering standards have been altered to 20° maximum angle of rudder, and alterations have been made to the steam supply pipes to the steering engine, but an opportunity for observing the effect of these alterations has not been given.

R. F. Beveridge



U.S. Monitor Admiral Farragut

Main Engines:-

- 1 Set connecting rod braces
- 2 Main bearing bolts + nuts
- 4 Connecting rod - - - top end ✓
- 2 - - - - - bottom ✓
- 8 Screw shaft bolts + nuts ✓
- 6 Studs, piston rod glands ✓
- 6 - value spindle -
- 15 - - casing
- 15 - cylinder covers
- 24 Bolts + nuts assorted for pipes ✓
- 1 H.P. + I.L.P. value spindle ✓
- 1 Pair braces, for valve spindle head
- 1 Set eccentric rod top end braced for one rod
- 1 Eccentric Strap complete
- 1 Set rings + springs for each size piston
- 1 Escape valve spring each cylinder of one engine
- 12 Junk ring bolts with brass bush nuts
- 100 assorted bolts + nuts ✓
- 1 Set blocks, rings + springs of each type for piston rod ^{and} pack ✓
- 1 - - - - - valve
- 2 - piston packing rings, steam cylinders reversing engine
- 2 - leathers
- 2 spare discs for Stop valve

Main + Aux. Circulating Pumps. Three in number.

- 1 Set main bearing braces for one engine
- 1 Pair crank pin - - -
- 1 - crosshead - - -
- 1 Set piston rings
- 1 Set connecting rod bolts + nuts, one engine

Main + Aux. Feed Pumps. Two in number.

- 1 Set steam piston rings each pump.
- 1 - bucket packing - - -
- 1 - suction + discharge valve seats, valves + guards, one pump
- 1 Piston rod + pump rod with nuts, one pump.

Main + Aux. Bio Pumps. Three in number.

- 2 sets steam piston rings one pump.
- 2 - pump bucket - - -
- 1 Piston rod + one pump rod with nuts + crosshead
- 1 Set valves + guards one pump.

Fore + Aft Pumps. Two in number.

- 1 Set steam piston rings for each pump
- 1 - water - - -
- 1 - suction + delivery valve seats, valves + guards one pump
- 1 - piston rod + pump rod with crosshead



Belfast

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Evaporator & Distilling plant.

1 complete set of tubes for Evaporator

1 - - - - - Distiller

1 Packing ring for each steam piston

1 - - - - - water -

1 set main bearing braces one engine

1 - crank pin - - - - -

1 - crosshead - - - - -

1 - piston rings - - - - -

1 - bolt nuts for connecting rod - -

Additional Spare Gear between

No. 472-3 (Admiral Farragut & General Grant)

2 Half crank shafts

1 Propeller shaft

2 Cast Iron propeller

2 outer & inner bushes

2 Circulating pump spindles

4 Cylinder escape valves

2 Sets Condenser tubes, ferrules, packing tools
for one condenser.