

REPORT ON MACHINERY

No. 76054

Received at London Office WED. 18 OCT. 1922

Date of writing Report Oct 14th 1922 When handed in at Local Office Oct 17th 1922 Port of NEWCASTLE-ON-TYNE

No. in Survey held at Newcastle-on-Tyne Date, First Survey December 15th 1919 Last Survey October 13th 1922
Reg. Book. 52435 on the Steel Saeu Steamer "Alabama" (Number of Visits 69)

Master - Built at Sunderland By whom built Sunderland S. R. Co Lim Gross 5400 Tons
Engines made at Wallsend By whom made North Eastern Marine & Co. Lim when made 1922 Net - Tons
Boilers made at do By whom made do when made 1922

Registered Horse Power 623 Owners Cie Generale Transatlantique Port belonging to France
Nom. Horse Power as per Section 28 620 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 28 - 46 1/2 - 78 Length of Stroke 54 Revs. per minute 75 Dia. of Screw shaft 15.56 as per rule 14 as fitted Material of screw shaft Steel

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 in 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 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 5-9

Dia. of Tunnel shaft 14.28 as per rule 15 as fitted Dia. of Crank shaft journals 14.99 as per rule 15 1/2 as fitted Dia. of Crank pin 16 Size of Crank webs 24 x 9 1/2 Dia. of thrust shaft under collars 16 Dia. of screw 18-3 Pitch of Screw 18-0 No. of Blades 4 State whether moveable Yes Total surface 104 5/8

No. of Food pumps one Diameter of ditto 3 1/2 Stroke 26 Can one be overhauled while the other is at work -

No. of Bilge pumps 2 Diameter of ditto 4 1/2 Stroke 26 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 4 Sizes of Pumps 11" x 10" x 10" 9" x 12" x 31" 5" x 7" x 18" 9" x 6" x 10" No. and size of Suctions connected to both Bilge and Donkey pumps 10-3 1/2" and one 3 1/2" tunnel well.

In Engine Room 3-3 1/2 In Holds, &c. 10-3 1/2" and one 3 1/2" tunnel well.

No. of Bilge Injections one sizes 10" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 4"

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 Below

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 None How are they protected -

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

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

BOILERS, &c.—(Letter for record 'S')

Manufacturers of Steel John Spencer

Total Heating Surface of Boilers 11500 Is Forced Draft fitted no No. and Description of Boilers 4 S-Ended Multitubular 4SB.

Working Pressure 180 Tested by hydraulic pressure to 320 Date of test 27.2.22=1 27.4.22=3 No. of Certificate 9653=1 9675=3

Can each boiler be worked separately Yes Area of fire grate in each boiler 44 No. and Description of Safety Valves to each boiler 2 Spring loaded Area of each valve 7.06 Pressure to which they are adjusted 185 Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 4-0 Mean dia. of boilers 16-6 Length 11-6 Material of shell plates steel

Thickness 1 3/8 Range of tensile strength 28-32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D. Riv long. seams 3/16" x 2" Riv

Diameter of rivet holes in long. seams 1 1/16 Pitch of rivets 9 3/4 Lap of plates or width of butt straps 2 1/4

Per centages of strength of longitudinal joint rivets 89.9 Working pressure of shell by rules 183 Size of manhole in shell 16" x 18" plate 85.25

Size of compensating ring Flanged No. and Description of Furnaces in each boiler 3 Heights Material steel Outside diameter 50 1/2

Length of plain part 19 Thickness of plates 3/32 Description of longitudinal joint Melted No. of strengthening rings -

Working pressure of furnace by the rules 187 Combustion chamber plates: Material steel Thickness: Sides 3/4 Back 3/4 Top 3/4 Bottom 1 1/32

Pitch of stays to ditto: Sides 10 1/2 x 9 Back 10 1/2 x 9 1/2 Top 10 1/2 x 9 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 190

Material of stays steel Area at smallest part 2.030 Area supported by each stay 99.45 Working pressure by rules 183 End plates in steam space: Material steel Thickness 1 1/16 Pitch of stays 24 x 22 How are stays secured J.R. x M. Working pressure by rules 185 Material of stays steel

Area at smallest part 9.62 Area supported by each stay 528 Working pressure by rules 189 Material of Front plates at bottom steel Thickness 3/32 Material of Lower back plate steel Thickness 3/32 Greatest pitch of stays 15 Working pressure of plate by rules 183

Diameter of tubes 3 1/2 Pitch of tubes 4 1/2 x 4 3/8 Material of tube plates steel Thickness: Front 3/32 Back 5/32 Mean pitch of stays 11 1/8

Pitch across wide water spaces 15 Working pressures by rules 182 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 9 1/2 x 2 Length as per rule 33 Distance apart 10 1/2 Number and pitch of stays in each 3-9

Working pressure by rules 219 Steam dome: description of joint to shell None % of strength of joint -

Diameter - Thickness of shell plates - Material - Description of longitudinal joint - Diam. of rivet holes -

Pitch of rivets - Working pressure of shell by rules - Crown plates - Thickness - How stayed -

SUPERHEATER.

Type none

Date of Approval of Plan -

Tested by Hydraulic Pressure to -

Date of Test -

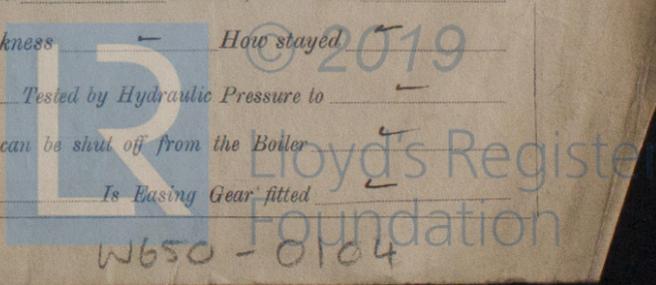
Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler -

Diameter of Safety Valve -

Pressure to which each is adjusted -

Is Easing Gear fitted -

W650-0104



IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied: - 2 bottom end, and 2 top end bolts + nuts, 2 main bearing bolts + nuts, one set of coupling bolts + nuts, 4 ridge pump valves, one set of Lockwood + Carleoles rings for each cylinder + 4 palete valve, 180 bolts + nuts assorted, 2 cut of iron plate, one cut of iron bars, one propeller shaft, 2 bronze propeller blades, 1/3 crankshaft, HP valve spindle, Piston rod + nut, Eccentric rod, air pump rod + bucket + nut, Eccentric theme + strap complete, one pair of crank pin bearings, one guide shoe, one pair of wash head brasses, one spare impeller + spindle for circulating pump, and a considerable amount of other spare gear of minor importance.

The foregoing is a correct description,

THE NORTH EASTERN MARINE ENGINEERING Co., LTD.

J. Harrison

Manufacturer.

Dates of Survey while building: During progress of work in shops - 1919 Dec 10-1920 Feb 20, 26, 29, 30, Feb 4, 2021 Jan 19, 23, Feb 15, March 7, 18, April 19, 20, 22, 27, 1921 May 10, 20, 24, 27, June 3, 29, July 6, 11, 14, 22, Aug 23, Sept 2, 14, 21, Oct 5, 13, Dec 13, 1922 Jan 6, 9, 13, 23, 24, Feb 3, 7, 14, 20, 24, 27, March 1, 10, 14, 29, April 6, 11, 25, May 3, 23, 30, July 3, 19, 27, Aug 15, Sept 5. During erection on board vessel - 1922 Sept 22, 26, 27, 29, Oct 3, 5, 13. Total No. of visits 69

Is the approved plan of main boiler forwarded herewith? Yes

Dates of Examination of principal parts: Cylinders 29.12.20, 15.2.21, 7.5.21; Slides 9.2.22; Covers 27.5.21; Pistons 29.12.20, 11.7.21; Rods 7.2.22; Connecting rods 7.2.22; Crank shaft 20.4.21; Thrust shaft 30.1.20; Tunnel shafts 6.7.21; Screw shaft 24.4.21; Propeller 23.1.21, 27.5.21, 29.6.21; Stern tube 19.1.21; Steam pipes tested 9.1.22; Engine and boiler seatings 26.9.22; Engines holding down bolts 5.10.22; Completion of pumping arrangements 13.10.22; Boilers fixed 5.10.22; Engines tried under steam 13.10.22; Completion of fitting sea connections; Stern tube 26.9.22; Screw shaft and propeller 26.9.22; Main boiler safety valves adjusted 13.10.22; Thickness of adjusting washers P=3/8 S=3/8, P=1/2 S=1/2, P=3/4 S=3/4, P=3/8 S=1/6; Material of Crank shaft steel; Identification Mark on Do. 25.4.21 NR; Material of Thrust shaft steel; Identification Mark on Do. 23.1.20, 22, 5214; Material of Tunnel shafts steel; Identification Marks on Do. 6.7.21 NR; Material of Screw shafts steel; Identification Marks on Do. 3.12.20 NR; Material of Steam Pipes Copper; Test pressure 360 lb.

Is an installation fitted for burning oil fuel? no. Is the flash point of the oil to be used over 150°F. Have the requirements of Section 49 of the Rules been complied with. Is this machinery duplicate of a previous case? Yes. If so, state name of vessel: S.D. Jensen No 2375.

General Remarks (State quality of workmanship, opinions as to class, &c.) This vessel's machinery has been examined during construction, and the materials and workmanship are good and in accordance with the requirements of the rules and the approved plans. On completion it was submitted to a steam trial with satisfactory results, at which time the safety valves were adjusted under steam to the working pressure. It is therefore eligible in my opinion to be classed in the R. Rule with the notation of +LMC 10.22.

It is submitted that this vessel is eligible for THE RECORD. + LMC 10.22. CL.

Certificate (if required) to be sent to Newcastle. The Surveyors are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee ... £ 6 : 0 : When applied for, 17/10/22. Special ... £ 106 : 3 : When received, 27.10.22. Donkey Boiler Fee ... £ : : Travelling Expenses (if any) £ :

Handwritten signature: Francis Pitton, Engineer Surveyor to Lloyd's Register of Shipping. Date: 24/10/22.

Committee's Minute: FRI. NOV. 17 1922. Assigned: + LMC 10.22, C.L. TUE. NOV. 20 1922.

