

REPORT ON MACHINERY.

No. 25501
FRI. NOV. 22. 1912

Received at London Office

Date of writing Report 19-11-1912 When handed in at Local Office 21-11-1912 Port of Sunderland
No. in Survey held at Sunderland Date, First Survey 30th July Last Survey 19th November 1912
Reg. Book. Steel S.S. "Salamanca" (Number of Visits 32)
Master C. J. Daniel Built at Sunderland By whom built J. Blumer & Co. 213 1/2 Tons { Gross 3246.68
Engines made at Sunderland By whom made North Eastern Marine Eng. Co. Ltd. (200 C.) when made 1918
Boilers made at Sunderland By whom made North Eastern Marine Eng. Co. Ltd. when made 1918
Registered Horse Power 290 Owners Scholefield Steam Shipping Co. Ltd. Port belonging to Newcastle
Nom. Horse Power as per Section 28 290 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

Three

No. of Cranks

Three

Dia. of Cylinders 24" x 39" x 65" Length of Stroke 42" Revs. per minute 65 Dia. of Screw shaft 13.26 as per rule 13.26 Material of Steel
as fitted 13.26 screw shaftIs 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 tightin 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 partbetween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive yes If twoliners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 4'-6 1/2"Dia. of Tunnel shaft 11.25 as per rule 11.25 Dia. of Crank shaft journals 12.26 as per rule 12.26 Dia. of Crank pin 12.26 Size of Crank webs 18 1/2" x 13" Dia. of thrust shaft undercollars 12 1/2" Dia. of screw 16-6" Pitch of Screw 1 1/4"-0" No. of Blades 4 State whether moveable no Total surface 86 1/2"No. of Feed pumps Two Diameter of ditto 3" Stroke 24" Can one be overhauled while the other is at work yesNo. of Bilge pumps Two Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work yesNo. of Donkey Engines Two Sizes of Pumps Ballast 4" x 9" x 9" Feed 4 1/2" x 5" x 6" No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room 2 @ 3" dia & 1 @ 3 1/2" dia in well In Holds, &c. 2 @ 3" dia in Fore Hold, 2 @ 3" dia inMain Hold. 2 @ 3" dia & 1 @ 3" dia in well after hold. by 2 @ 3" dia in Tunnel well.No. of Bilge Injections two sizes 4 1/2" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size yes 3 1/2"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 yesAre all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks BothAre 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 aboveAre 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 yesWhat pipes are carried through the bunkers Hold Suctions How are they protected wood casingAre all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yesAre the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yesDates of examination of completion of fitting of Sea Connections 23-10-12 of Stern Tube 4-11-12 Screw shaft and Propeller 4-11-12Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top platform

BOILERS, &c.—(Letter for record)

Manufacturers of Steel

Spencer & Sons

Total Heating Surface of Boilers 4364 1/2 Is Forced Draft fitted no No. and Description of Boilers Two single ended.Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 22-10-12 No. of Certificate 3054Can each boiler be worked separately yes Area of fire grate in each boiler 55 1/2 No. and Description of Safety Valves toeach boiler Two direct spring Area of each valve 5.94 Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yesSmallest distance between boilers or uptakes and bunkers or woodwork 18 outside dia. of boilers 15-9" Length 10-6" Material of shell plates SteelThickness 1 1/4" Range of tensile strength 28 3/4 & 32 lbs Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D.R.long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 1/16 Pitch of rivets 9 5/8 Lap of plates or width of butt straps 19 3/4"Per centages of strength of longitudinal joint 86.45 rivets 86.36 plate Working pressure of shell by rules 180 lbs Size of manhole in end 16" x 12"Size of compensating ring dished No. and Description of Furnaces in each boiler Three Cor. Material Steel Outside diameter 4 1/2"Length of plain part top bottom Thickness of plates crown 3 1/4" Description of longitudinal joint weld. No. of strengthening rings ✓Working pressure of furnace by the rules 185 lbs Combustion chamber plates: Material Steel Thickness: Sides 3 1/4" Back 2 5/8" Top 3 1/4" Bottom 3 1/4"Pitch of stays to ditto: Sides 8 1/2" x 10" Back 10 3/4" x 10 3/4" Top 1 1/2" x 11 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180 lbsMaterial of stays Steel Diameter at smallest part 2-1" Area supported by each stay 102" Working pressure by rules 184 lbs End plates in steam space:Material Steel Thickness 1 3/8" Pitch of stays 22 3/4" x 20 3/4" How are stays secured D.N. Wash Working pressure by rules 180 1/2 lbs Material of stays SteelDiameter at smallest part 8.29 Area supported by each stay 4 1/2" Working pressure by rules 182 lbs Material of Front plates at bottom SteelThickness 3 1/4" Material of Lower back plate Steel Thickness 1 1/2" Greatest pitch of stays 14 3/4" x 10 3/4" Working pressure of plate by rules 182 lbsDiameter of tubes 3 1/4" Pitch of tubes 4 3/4" x 4 5/8" Material of tube plates Steel Thickness: Front 3 1/4" Back 3 1/4" Mean pitch of stays 10 7/16"Pitch across wide water spaces 14 1/2" Working pressures by rules 192 lbs Girders to Chamber tops: Material Steel Depth andthickness of girder at centre 20 8" x 15 1/16" Length as per rule 28 1/2" Distance apart 11 1/8" Number and pitch of stays in each 2 @ 1 1/2"Working pressure by rules 180 lbs Superheater or Steam chest; how connected to boiler how Can the superheater be shut off and the boiler workedseparately ✓ Diameter ✓ Length ✓ Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ Diam. of rivetholes ✓ 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 ✓Lloyd's Register
W 847-0039
Foundation

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No.	Description	When made	Where fixed
Made at	By whom made	No. of Certificate	Fire grate area
Working pressure	tested by hydraulic pressure to	Date of test	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	Date of adjustment	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
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates
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:— Two each bolts & nuts for top & bottom ends & main bearings
One set coupling bolts, one set valves for all pumps, 2 safety valve springs, 2 feed check valves.
One tail and shaft one set HP & MP piston pins. Assorted bolts nuts & iron sundries etc.

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD

The foregoing is a correct description.

Manufacturer.

Manager.

Dates of Survey while building	During progress of work in shops --	1912. Jul, 30, 31, Aug, 12, 13, 24, 29, 30, Sep, 6, 12, 13, 18, 23, Oct, 3, 4, 8, 10, 15, 16, 22, 23, 24
	During erection on board vessel --	25, 28, 29, 30, Nov, 4, 8, 11, 13, 14, 15, 19
	Total No. of visits	32

Is the approved plan of main boiler forwarded herewith ☒ yes

Dates of Examination of principal parts—Cylinders	3-10-12	Slides	23-10-12	Covers	23-10-12	Pistons	23-10-12	Rods	15-10-12
Connecting rods	15-10-12	Crank shaft	3-10-12	Thrust shaft	3-10-12	Tunnel shafts	3-10-12	Screw shaft	25-10-12
Stern tube	23-10-12	Steam pipes tested	18-9-12	Engine and boiler seatings	23-10-12	Engines holding down bolts	11-11-12		
Completion of pumping arrangements	15-11-12	Boilers fixed	11-11-12	Engines tried under steam	15-11-12				
Main boiler safety valves adjusted	15-11-12	Thickness of adjusting washers	8.03 F ⁵ / ₁₆ A ⁵ / ₁₆ , 8.03 F ⁵ / ₁₆ A ⁵ / ₁₆						
Material of Crank shaft	Steel	Identification Mark on Do.	4820-1-2-3-4 K.H.	Material of Thrust shaft	Steel	Identification Mark on Do.	3998 H.K.		
Material of Tunnel shafts	Steel	Identification Marks on Do.	4348 J.M. 1852 M.B. 1853 M.B. 4936 P.A. 4454 K.H.	Material of Screw shafts	Steel	Identification Marks on Do.	5002 P.A.		
Material of Steam Pipes	Lap welded with iron	4 1/2" x 5/16" to 5" x 1/2"	Test pressure	540 lbs.					

General Remarks

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

The Machinery of this vessel has been built under special survey, the materials and workmanship are of good quality and the hydraulic tests of the boilers proved satisfactory. The whole of the machinery has been securely fitted on board & tried under steam is in good & safe working condition & eligible in my opinion to be classed & have record. **LMC. 11-12** in the Register Book.

It is submitted that this vessel is eligible for THE RECORD.

LMC 11-12

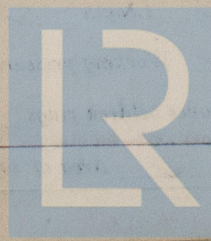
The amount of Entry Fee	£ 2 : 0 : 0	When applied for.	21. 11. 1912.
Special	£ 34 : 10 : 0	When received,	23. 11. 1912.
Donkey Boiler Fee	£ :		
Travelling Expenses (if any)	£ :		

Committee's Minute

Assigned

FRI NOV 22 1912

William D. Butler.
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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