

# REPORT ON MACHINERY.

No. 63005

Received at London Office

Date of writing Report 19 When handed in at Local Office SEP 21 1912 Port of Newcastle-on-Tyne MON SEP 23 1912

No. in Survey held at South Shields Date, First Survey 11<sup>th</sup> Mar 1912 Last Survey 12<sup>th</sup> Sept 1912  
Reg. Book. 652 on the S.S. "THYRA MENIER" (Number of Visits 42)

Master Built at Blyth By whom built Blyth S. B. Co Ltd When built 1912

Engines made at South Shields By whom made G. J. Grey when made 1912

Boilers made at South Shields By whom made Jos. J. Eltringham when made 1912

Registered Horse Power Owners Donald S. S. Co Ltd. Port belonging to Bristol

Nom. Horse Power as per Section 28 146 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

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

Dia. of Cylinders 17"-28"-46" Length of Stroke 33" Revs. per minute Dia. of Screw shaft as per rule 10.03" Material of 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 Yes 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 Yes If two

liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 3'-6"

Dia. of Tunnel shaft as per rule 8.65" Dia. of Crank shaft journals as per rule 9.08" Dia. of Crank pin 9 3/8" Size of Crank webs 18 1/2 x 6" Dia. of thrust shaft under

collars 9 3/8" Dia. of screw 12'-9" Pitch of Screw 13'-0" No. of Blades 4 State whether moveable No Total surface 52 sq ft

No. of Feed pumps 2 Diameter of ditto 2 3/4" Stroke 17" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 3 1/4" Stroke 17" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 Sizes of Pumps 5 1/2 x 3 1/2 x 8", 7 1/2 x 8 1/2 x 8" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 4 Boiler Space 4-2 1/2" In Holds, &c. Fore-hold 2-2 1/2", After Hold 2-2 1/2"

Tunnel well suction 2 1/2"

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

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 Yes

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 above

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 Yes

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 12-8-12 of Stern Tube 12-8-12 Screw shaft and Propeller 17-8-12

Is 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 John Spencers & Sons Ltd.

Total Heating Surface of Boilers 2450 sq ft 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 13-8-12 No. of Certificate 8361

Can each boiler be worked separately Yes Area of fire grate in each boiler 32.75 sq ft No. and Description of Safety Valves to

each boiler Two-spring loaded Area of each valve 3.98 sq in 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 1'-2" 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

Per centages 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

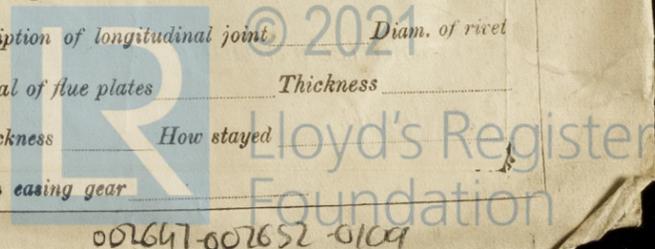
holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

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

If not, state whether, and when, one will be sent

Im 21-1-11



002647-002652-0109

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 Safety \_\_\_\_\_

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 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 \_\_\_\_\_ 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 top end bolts + nuts; two bottom end bolts + nuts; two main bearing bolts; 1 set coupling bolts; set of piston junk ring bolts; set each of air, cir<sup>g</sup>, feed & bilge pump valves; propeller + propeller shaft; set of piston springs; pair of top end brasses; bottom end bearing; cir<sup>g</sup> pump rod; eccentric strap; assorted bolts + nuts + iron.

The foregoing is a correct description, Arthur T. Hey  
 Manufacturer. Pyrites

Dates of Survey while building

During progress of work in shops ---	1912 Mar. 11-21. Apr. 2-10-17-24. May. 3-6-8-13-16-20-21-24-30. Jun. 4-10-13-14-19-24. Jul. 1-4-9-22
During erection on board vessel ---	Aug. 1-7-8-12-16-18-20-21-22-23-27-28-29-30-31. Sep. 4-12.
Total No. of visits	42

Is the approved plan of main boiler forwarded herewith yes ✓

" " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders 24-5-12 Slides 19-6-12 Covers 21-5-12 Pistons 8-5-12 Rods 10-6-12

Connecting rods 4-6-12 Crank shaft 20-5-12 Thrust shaft 1-8-12 Tunnel shafts 21-8-12 Screw shaft 1-8-12 Propeller 8-8-12

Stern tube 1-8-12 Steam pipes tested 30-8-12 Engine and boiler seatings 15-8-12 Engines holding down bolts 30-8-12

Completion of pumping arrangements 12-9-12 Boilers fixed 22-8-12 Engines tried under steam 4-9-12

Main boiler safety valves adjusted 4-9-12 Thickness of adjusting washers Star 4 Bl. S 5/16 3/2 P 3/8 Port 8 Bl. S 5/16 3/2 P. 5/16 3/2

Material of Crank shaft Pin steel Identification Mark on Do. 273 W.D.H. Material of Thrust shaft Steel Identification Mark on Do. 4958 P.A.

Material of Tunnel shafts Steel Identification Marks on Do. 7613-14-15 K.W. Material of Screw shafts Steel Identification Marks on Do. 4861 P.A.

Material of Steam Pipes Solid drawn copper. Test pressure 360 lbs.

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

The machinery of this vessel has been constructed under special survey, & the materials & workmanship are sound & good. The engines & auxiliary machinery have been tried under steam, & the boiler safety valves adjusted to their working pressure. The machinery is now in a good & safe working condition & eligible in my opinion to have the notation of **+ L.M.C. 9-12**, in the Register Book.

It is submitted that this vessel is eligible for THE RECORD, + L.M.C. 9-12.

J.W.D.  
23/9/12

The amount of Entry Fee .. £ 2-0-0 When applied for, SEP 21 1912

Special .. £ 21-18-0

Donkey Boiler Fee .. £ : : When received, 20/9/12

Travelling Expenses (if any) £ : : 19/9/12

John Houston  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute TUE. SEP. 24 1912

Assigned

+ L.M.C. 9-12

MACHINERY CERTIFICATE  
 ENTERED



© 2021

Lloyd's Register  
 Foundation

NEWCASTLE ON TYNE

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