

REPORT ON MACHINERY.

Port of *Newcastle on Tyne*

THUR. 10 DEC 1903

Survey held at *S. Shields*
Book.Date, first Survey *July 10th*

Received at London Office

Last Survey *Dec 1*

1903.

(Number of Visits *31*)

on the

*S. S. THELMA*Tons { Gross
NetWhen built *1903*when made *1903-12*when made *17. 10. 03.*Port belonging to *Glasgow*Horse Power as per Section 28 *132.8*Is Refrigerating Machinery fitted *no*Is Electric Light fitted *no*

INES, &c.—Description of Engines

*Tri-compound*No. of Cylinders *3*No. of Cranks *3*of Cylinders *17-28½-46* Length of Stroke *30"* Revs. per minute *80* Dia. of Screw shaft as per rule *9.5*of Tunnel shaft as fitted *8.41* Dia. of Crank shaft journals as per rule *8.83* Dia. of Crank pin *8 7/8* Size of Crank webs *8 1/2* Dia. of thrust shaft underas fitted *8 1/2* Dia. of screw *11-9* Pitch of screw *14-0"* No. of blades *4* State whether moveable *no* Total surface *45 sq*of Feed pumps *2* Diameter of ditto *2 3/4* Stroke *16"* Can one be overhauled while the other is at work *yes*of Bilge pumps *2* Diameter of ditto *2 3/4* Stroke *16* Can one be overhauled while the other is at work *yes*of Donkey Engines *2* Sizes of Pumps *6x7½x6 Duplex* No. and size of Suctions connected to both Bilge and Donkey pumpsEngine Room *Three of 3"* In Holds, &c. *main hold Two of 3", after hold*

No. of 3", after pump one of 3", well one of 3"

of bilge injections *1* sizes *3 1/2* Connected to *condensers* or to circulating pump *pump* Is a separate donkey suction fitted in Engine room & size *yes. 3"*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 *no sluices*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*pipes are carried through the bunkers *None* How are they protected *L*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*Were stern tube, propeller, screw shaft, and all connections examined in dry dock *new Vues* Is the screw shaft tunnel watertight *yes*Fitted with a watertight door *yes* worked from *Top platform*ERS, &c.— (Letter for record *(5)*) Total Heating Surface of Boilers *2152 sq* Is forced draft fitted *no*and Description of Boilers *One Cyl. Mult. Single end. Working Pressure 180 lb* Tested by hydraulic pressure to *360 lb*of test *17. 10. 03* Can each boiler be worked separately *yes* Area of fire grate in each boiler *51.75 sq* No. and Description of safety valves toboiler *2 Spring loaded* Area of each valve *5.94* Pressure to which they are adjusted *185 lb* Are they fitted with easing gear *yes*Test distance between boilers or uptakes and bunkers or woodwork *21"* Mean dia. of boilers *15'-0"* Length *10'-6"* Material of shell plates *S.*Thickness *3/32* Range of tensile strength *27 tons* Are they welded or flanged *yes* Descrip. of riveting: cir. seams *L.D.R.* long. seams *D.B.T.R.*Diameter of rivet holes in long. seams *1 5/16* Pitch of rivets *7 1/2" (4.p.p.)* Lap of plates on width of butt straps *18 3/8"*Percentages of strength of longitudinal joint rivets *83.5* Working pressure of shell by rules *184 lb* Size of manhole in shell *16" x 12"*of compensating ring *7 1/2" x 1 3/32"* No. and Description of Furnaces in each boiler *3. Plain* Material *S.* Outside diameter *43"*Thickness of plain part top *7.5* Thickness of plates crown *49/64* Description of longitudinal joint *D.B.S.* No. of strengthening rings *One T.*Working pressure of furnace by the rules *180 lb* Combustion chamber plates: Material *S.* Thickness: Sides *1/16* Back *1/32* Top *1/16* Bottom *49/64*of stays to ditto: Sides *10 x 9* Back *9 1/2 x 8* Top *9 1/2 x 8 1/2* If stays are fitted with nuts or riveted heads *yes* Working pressure by rules *180 lb*Material of stays *S.* Diameter at smallest part *1 1/32* Area supported by each stay *90"* Working pressure by rules *198 lb* End plates in steam space:Material *S.* Thickness *15/16* Pitch of stays *19 1/4 - 19 1/2* How are stays secured *D.N.W.* Working pressure by rules *192 lb* Material of stays *S.*Diameter at smallest part *3 1/32* Area supported by each stay *385"* Working pressure by rules *187 lb* Material of Front plates at bottom *S.*Material of Lower back plate *S.* Thickness *3/32* Greatest pitch of stays *15 1/4 - 8"* Working pressure of plate by rules *208 lb*Diameter of tubes *3 1/2* Pitch of tubes *4 1/4 - 4 1/4* Material of tube plates *S.* Thickness: Front *1"* Back *7/8"* Mean pitch of stays *11 1/8"*across wide water spaces *14 1/2"* Working pressures by rules *182 lb* Girders to Chamber tops: Material *S.* Depth andWeight of girder at centre *7 x 2 7/8* Length as per rule *31* Distance apart *9 1/2"* Number and pitch of Stays in each *2 - 8 1/2"*Working pressure by rules *192 lb* Superheater or Steam chest; how connected to boiler *none* Can the superheater be shut off and the boiler workedseparately *yes* Diameter *yes* Length *yes* Thickness of shell plates *yes* Material *yes* Description of longitudinal joint *yes* Diam. of rivetPitch of rivets *yes* Working pressure of shell by rules *yes* Diameter of flue *yes* Material of flue plates *yes* Thickness *yes*Fitted with rings *yes* Distance between rings *yes* Working pressure by rules *yes* End plates: Thickness *yes* How stayed *yes*Working pressure of end plates *yes* Area of safety valves to superheater *yes* Are they fitted with easing gear *yes*Lloyd's Register
Foundation

W750-0075 (1/2)

OF THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

DONKEY BOILER— No. 1 Description Vertical cross tube
Made at Zwolle By whom made Zwolsche Machine Fabriek When made 1903 Where fixed Stockholm
Working pressure 100 tested by hydraulic pressure to 200 No. of Certificate 62 Fire grate area 30 sq ft Description of safety valves Spring loaded
No. of safety valves 2 Area of each 5.94 Pressure to which they are adjusted 100 lb If fitted with easing gear Yes If steam from main boiler
enter the donkey boiler No Dia. of donkey boiler 7.6 Length 12-0 Material of shell plates steel Thickness 7/32 Range of temperature
strength 27/32 Descrip. of riveting long seams Lap double riveted Dia. of rivet holes 3/4 Whether punched or drilled drilled Pitch of rivets 2
Lap of plating 5 1/4 Per centage of strength of joint Rivets 73.8 Thickness of shell crown plates 13/16 Radius of do. 6.4 No. of Stays to do. 8
Dia. of stays 2 Diameter of furnace Top 5.11 1/2 Bottom 6-4 1/2 Length of furnace 6-4 Thickness of furnace plates 3/4 Description
joint Lap Thickness of furnace crown plates 11/16 Stayed by 8 stays 2" diam Working pressure of shell by rules 1
Working pressure of furnace by rules Diameter of uptake 1-6 Thickness of uptake plates 7/16 Thickness of water tubes 7/8

SPARE GEAR. State the articles supplied:— 2 Top End 2 bottom end 2 main bearing bolts
+ nuts, 1 set coupling bolts + nuts, 5 Piston bolts + nuts, 1 set Fed. helix, air & water
pump valves & ballast pumps, 2 Spare H.P. & I.P. Piston rings, 1 spare propeller

The foregoing is a correct description,

W. C. Cunningham Manufacturer. Main Boiler G. J. Gray Engine Builder

Dates During progress of work in shops— ENR: 1903 Aug 14, 24, 27, 31, Sept 11, 29, Oct 7, 14, 27, Nov 10, 19, 28, 29, 30, Dec 1.
of Survey while board vessel— BUR: 1903 July 10, 16, 20, 24, 30, Aug 5, 26, Sept 13, 17, 29, Oct 4, 12, 27.
building Total No. of visits 31

Is the approved plan of main boiler forwarded herewith Yes

donkey " " " 170

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

Material of screw shaft Scrap iron 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 No
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
non-corrosive Fitting If two liners are fitted, is the shaft lapped or protected between the liners Yes

This boiler has been constructed under special survey & is of sound material
and workmanship. On completion it has been tested and
satisfactorily with the rules and was found to be satisfactory
The Machinery of this vessel has been built under Special
Survey & in my opinion is eligible for record F.L.M.C 12.0

It is submitted that
this vessel is eligible for
THE RECORD

F.L.M.C 12.03

W. Lane. 10.12.03
G. J. Gray 10.12.03

The amount of Entry Fee. £ 2
Special £ 19 16
Donkey Boiler Fee £
Travelling Expenses (if any) £

When applied for, 9 DEC 1903
When received, 16/12/03

W. Lane. 17.12.03 G. J. Gray 17.12.03
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute

FRI. 11 DEC 1903

Assigned

+ L.M.C 12.03

MACHINERY CERTIFICATE
WRITTEN.



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Lloyd's Register
Foundation

D.J. Bohday 206

Port of

Rotterdam

Continuation of Report No. 3497. dated 9th Nov. 03. on the

New. Steel Screw Steamer - "Thelma" of Glasgow.

Please see Secretary's letter dated 15th August 1903. E.

This vessel is towed to South Shields and the Engines and Boilers will fitted at this place; the makers are Messrs. G. Gray.

Seacnections have been fixed at this Port and are fastened as required by the Rules.

The Donkey Boiler has been placed on board a few days before the vessel left and was surveyed by Mr. Pebe from Amsterdam - during construction at Zwolle, all connections to be made to this Boiler at South Shields and to be examined -

The pipe arrangements in holds and Ballast Tanks have all been completed at this Port in accordance with the approved plan forwarded to day - all pipes have been led to Bulkheads of Engine and Boiler space - and require to be further completed in South Shields -

Hold. Suctions:

Forehold. $2 \times 2\frac{1}{2}$ " - Afterhold. $2 \times 2\frac{1}{2}$ " - Wing - Centre Suction well. $2\frac{1}{2}$ " - Tank Suctions have all been made $2\frac{1}{2}$ " Air and Pounding pipes. Good.

P. Leuwentburg.