

## REPORT ON MACHINERY.

No. 49816

MON 18 DEC 1906

Port of *Newcastle*

Received at London Office

19

No. in Survey held at *Newcastle* Date, first Survey *Feb. 1* Last Survey *Dec. 11* 1905  
 Reg. Book. *S/S Taarnholm* (Number of Visits *40*)  
 on the *H.M. Winkler* Built at *Newcastle* By whom built *Wood Skinner & Co. Ltd.* Tons { Gross *1400*  
 Engines made at *Newcastle* By whom made *M.C.M. Eng. Co. Ltd.* when made *1905*  
 Boilers made at *"* By whom made *"* when made *1905*  
 Registered Horse Power *168* Owners *Johnson & Jespersen* Port belonging to *Copenhagen*  
 Nom. Horse Power as per Section 28 *168* Is Refrigerating Machinery fitted *no* Is Electric Light fitted *no*

ENGINES, &c.—Description of Engines *In C.P.D.*

No. of Cylinders *3* No. of Cranks *3*  
 Dia. of Cylinders *19 31 51* Length of Stroke *33* Revs. per minute *40* Dia. of Screw shaft *as per rule 10.64* Material of *S*  
 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 *4 ft.*  
 Dia. of Tunnel shaft *as per rule 9.2* Dia. of Crank shaft journals *as per rule 9.6* Dia. of Crank pin *9 3/4* Size of Crank webs *19 3/4 x 16* Dia. of thrust shaft under  
 collars *9 3/4* Dia. of screw *13 9* Pitch of screw *13 9* No. of blades *4* State whether moveable *f* Total surface *58 sq*  
 No. of Feed pumps *2* Diameter of ditto *3* Stroke *18* Can one be overhauled while the other is at work *yes*  
 No. of Bilge pumps *2* Diameter of ditto *4* Stroke *18* Can one be overhauled while the other is at work *yes*  
 No. of Donkey Engines *2* Sizes of Pumps *8 x 8 x 8 & 6 x 4 x 6* No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room *4 of 3"* In Holds, &c. *Four two of 3"*  
 No. of bilge injections *1* sizes *4* Connected to condenser, or to circulating pump *C.P.* 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 *—*  
 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 *—*

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*  
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock *New Vessel* Is the screw shaft tunnel watertight *yes*  
 Is it fitted with a watertight door *yes* worked from *top platform*

BOILERS, &c.— (Letter for record *S*) Total Heating Surface of Boilers *2414 sq* Is forced draft fitted *no*  
 No. and Description of Boilers *2 S.E. Multitubular* Working Pressure *140 lb* Tested by hydraulic pressure to *340 lb*  
 Date of test *11-12-05* Can each boiler be worked separately *yes* Area of fire grate in each boiler *33 sq* No. and Description of safety valves to  
 each boiler *2 Spring* Area of each valve *4 9* Pressure to which they are adjusted *145* Are they fitted with easing gear *yes*  
 Smallest distance between boilers or uptakes and bunkers or woodwork *2 feet* Mean dia. of boilers *12 2* Length *10 3* Material of shell plates *S*  
 Thickness *31/32* Range of tensile strength *39 tons* Are they welded or flanged ends *ends* Descrip. of riveting: cir. seams *2. 7. 2 laps* long. seams *2. butt. Stk*  
 Diameter of rivet holes in long. seams *13/32* Pitch of rivets *4 5/16* Lap of plates or width of butt straps *13 3/4*  
 Per centages of strength of longitudinal joint *82.4* Working pressure of shell by rules *140 lb* Size of manhole in shell *dia. 16 x 12*  
 Size of compensating ring *flanged* No. and Description of Furnaces in each boiler *2 Deagles* Material *S* Outside diameter *41 1/2*  
 Length of plain part *top 9 bottom 9* Thickness of plates *top 5/8 bottom 5/8* Description of longitudinal joint *field* No. of strengthening rings *—*  
 Working pressure of furnace by the rules *182* Combustion chamber plates: Material *S* Thickness: Sides *1 1/8* Back *1 1/8* Top *1 1/8* Bottom *1 1/8*  
 Pitch of stays to ditto: Sides *9 5/8 x 9 5/8* Back *10 1/4 x 9* Top *9 5/8 x 9 5/8* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *146 lb*  
 Material of stays *S* Diameter at smallest part *1 5/8* Area supported by each stay *98 sq* Working pressure by rules *143* End plates in steam space:  
 Material *S* Thickness *1 1/8* Pitch of stays *18 3/8 x 18 3/8* How are stays secured *2 nuts* Working pressure by rules *144 lb* Material of stays *S*  
 Diameter at smallest part *2 9/16* Area supported by each stay *356 sq* Working pressure by rules *141* Material of Front plates at bottom *S*  
 Thickness *1 5/8* Material of Lower back plate *S* Thickness *7/8* Greatest pitch of stays *14 1/2* Working pressure of plate by rules *181*  
 Diameter of tubes *3 1/4* Pitch of tubes *4 1/2 x 4 1/2* Material of tube plates *S* Thickness: Front *1 5/16* Back *3/4* Mean pitch of stays *9*  
 Pitch across wide water spaces *14 1/2* Working pressures by rules *141 lb* Girders to Chamber tops: Material *S* Depth and  
 thickness of girder at centre *8 1/2 x 12* Length as per rule *30* Distance apart *9 5/8* Number and pitch of Stays in each *2 of 9 5/8*  
 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*

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**DONKEY BOILER—** No. \_\_\_\_\_ Description \_\_\_\_\_

Made at \_\_\_\_\_ By whom made \_\_\_\_\_ When made \_\_\_\_\_ Where fixed \_\_\_\_\_

Working pressure \_\_\_\_\_ tested by hydraulic pressure to \_\_\_\_\_ No. of Certificate \_\_\_\_\_ Fire grate area \_\_\_\_\_ 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 \_\_\_\_\_

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 \_\_\_\_\_ Rivet plate \_\_\_\_\_ 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 \_\_\_\_\_ Thickness of furnace crown plates \_\_\_\_\_ Stayed by \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_

Working pressure of furnace by rules \_\_\_\_\_ Diameter of uptake \_\_\_\_\_ Thickness of uptake plates \_\_\_\_\_ Thickness of water tubes \_\_\_\_\_

**SPARE GEAR.** State the articles supplied:— 1 set of connecting rod bolts and nuts. 2 main bearing bolts and nuts. 1 set of coupling bolts and nuts. 1 set of feed and bilge pump valves propeller and shaft nuts bolts and assorted iron

The foregoing is a correct description,  
**FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD.** Manufacturer.

*S. F. Harrison* ASSISTANT SECRETARY. *Per G.M.* 1905. Feb. 17. 20. 21. Mch. 9. 13. 21. 22. 23. Apl. 3. 20. May. 5. 9. June 6. 7. 9. July 2. 15. 17. 24

Dates of Survey while building { During progress of work in shops - - } { During erection on board vessel - - }  
 Total No. of visits *40*

Is the approved plan of main boiler forwarded herewith *duplicate*

**General Remarks** (State quality of workmanship, opinions as to class, &c. *donkey*) *Machinery and boilers built under special survey. Materials and workmanship good. Engines and boilers examined under full steam & found satisfactory. In my opinion this vessel is eligible for the record of L.M.C. 12/05 in the Register Book.*

*Letter read to "Franklin."*

It is submitted that  
 this vessel is eligible for  
 THE RECORD *L.M.C. 12.05*

*Emil.*

*18.12.05.*

*RS.*  
*18.12.05*

The amount of Entry Fee. . . £ *2* : : : When applied for, *14 DEC 1905*  
 Special . . . £ *25* : : :  
 Donkey Boiler Fee . . . £ : : : When received, *16 DEC 1905*  
 Travelling Expenses (if any) £ : : :

*J. F. Findlay*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

TUES. 19 DEC 1905

Assigned

*+ Lmb 12 05*

MACHINERY CERTIFICATE  
 WRITTEN.



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 Foundation

*Newcastle-on-Tyne.*

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