

REPORT ON MACHINERY.

Port of *Hull*

Received at London **THUR. 30 AUG 1906**

No. in Survey held at *Beverley + Hull* Date, first Survey *Jan 4th* Last Survey *2nd Aug 1906*
 Reg. Book. *959** on the *Screw Trawler "Licynon"* (Number of Visits *39*) Tons { Gross *283* Net *120*
 Master *Beverley* Built at *Beverley* By whom built *Cook, Welton + Gemmell* When built *1906*
 Engines made at *Hull* By whom made *Amos + Smith* when made *1906*
 Boilers made at *do* By whom made *do* when made *1906*
 Registered Horse Power *85.8* Owners *The Standard S. F. Co Ltd* Port belonging to *Grimby*
 Nom. Horse Power as per Section 28 *85.8* Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *No*

ENGINES, &c.—Description of Engines *Triple* No. of Cylinders *3* No. of Cranks *3*

Dia. of Cylinders *13, 22, 36"* Length of Stroke *24"* Revs. per minute *110* Dia. of Screw shaft *8"* 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 *3'-0"*
 Dia. of Tunnel shaft *6.7"* Dia. of Crank shaft journals *7.8"* Dia. of Crank pin *7.2"* Size of Crank webs *1 1/2 x 4 3/4"* Dia. of thrust shaft under collars *7.2"* Dia. of screw *9'-0"* Pitch of Screw *11'-0"* No. of Blades *4* State whether moveable *No* Total surface *30 sq. ft*
 No. of Feed pumps *1* Diameter of ditto *2 7/8"* Stroke *12"* Can one be overhauled while the other is at work *✓*
 No. of Bilge pumps *1* Diameter of ditto *3"* Stroke *12"* Can one be overhauled while the other is at work *✓*
 No. of Donkey Engines *Two* Sizes of Pumps *6x3x6" 5x5x5"* No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room *One 2" dia* In Holds, &c. *Four 2" to holds + slush wells*
 Ejector suction from all bilges + discharge on deck.
 No. of Bilge Injections *1* sizes *3"* Connected to condenser, or to circulating pump *Pump* Is a separate Donkey Suction fitted in Engine room & size *2" Donkey 2" Ejector*
 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 *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 *Forward suction* How are they protected *Wood casing*
 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 *23/5/06* of Stern Tube *23/5/06* Screw shaft and Propeller *23/5/06*
 Is the Screw Shaft Tunnel watertight *None* Is it fitted with a watertight door *✓* worked from *✓*

BOILERS, &c.—(Letter for record (S) Manufacturers of Steel *The Steel Company of Scotland Ltd.*

Total Heating Surface of Boilers *1500 sq. ft.* Forced Draft fitted *No* No. and Description of Boilers *One S.E. by Mr. Muller*
 Working Pressure *200 lbs* Tested by hydraulic pressure to *400 lbs* Date of test *25.6.06* No. of Certificate *1481*
 Can each boiler be worked separately *✓* Area of fire grate in each boiler *41 1/4 sq. ft.* No. and Description of Safety Valves to each boiler *Two direct spring* Area of each valve *4.9"* Pressure to which they are adjusted *205 lbs* Are they fitted with easing gear *yes*
 Smallest distance between boilers or uptakes and bunkers or woodwork *7"* Mean dia. of boilers *13'-6"* Length *10'-6"* Material of shell plates *Steel*
 Thickness *1 3/32"* Range of tensile strength *28-32 tons* Are the shell plates welded or flanged *No* Descrip. of riveting: cir. seams *DR. Lap*
 long. seams *DR. S. Rivet* Diameter of rivet holes in long. seams *1 3/32"* Pitch of rivets *8 7/16"* Lap of plates or width of butt straps *18 3/4"*
 Per centages of strength of longitudinal joint rivets *91.2* plate *85* Working pressure of shell by rules *200 lbs* Size of manhole in shell *16x12"*
 Size of compensating ring *40x30x1 1/2"* No. and Description of Furnaces in each boiler *Two Deighton* Material *Steel* Outside diameter *4'-1 1/4"*
 Length of plain part top *✓* bottom *✓* Thickness of plates crown *11/16"* bottom *7/16"* Description of longitudinal joint *Welded* No. of strengthening rings *✓*
 Working pressure of furnace by the rules *228 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *11/16"* Back *11/16"* Top *5/8"* Bottom *11/16"*
 Pitch of stays to ditto: Sides *9x7"* Back *9 1/2 x 8 1/2"* Top *7x8"* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *201 lbs*
 Material of stays *Steel* Diameter at smallest part *1 5/8"* Area supported by each stay *80.75* Working pressure by rules *230 lbs* End plates in steam space: Material *Steel* Thickness *1 3/32"* Pitch of stays *16x17 1/2"* How are stays secured *5 Nuts + 4 screws into end plates* Working pressure by rules *201 lbs* Material of stays *Steel*
 Diameter at smallest part *7.24"* Area supported by each stay *280* Working pressure by rules *258 lbs* Material of Front plates at bottom *Steel*
 Thickness *31/32"* Material of Lower back plate *Steel* Thickness *15/16"* Greatest pitch of stays *14"* Working pressure of plate by rules *225 lbs*
 Diameter of tubes *3 1/2"* Pitch of tubes *5 1/8 x 4 3/4"* Material of tube plates *Steel* Thickness: Front *31/32"* Back *7/8"* Mean pitch of stays *9 7/8"*
 Pitch across wide water spaces *14"* Working pressures by rules *208 lbs* Girders to Chamber tops: Material *Iron* Depth and thickness of girder at centre *9 1/4 x 2"* Length as per rule *2'-10"* Distance apart *8"* Number and pitch of stays in each *30 7"*
 Working pressure by rules *209 lbs* Superheater or Steam chest; how connected to boiler *None* 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? In a Report also sent on the Hull of the Ship?

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 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	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		Stayed by		
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:— *Two top + two bottom-end connecting rod bolts + nuts. Two main bearing bolts + nuts. One set of coupling bolts + nuts. One set of feed + bilge pump valves. Main + donkey feed check valves. Assorted bolts + nuts &c.*

The foregoing is a correct description,

FOR AMOS & SMITH
W. H. H. H.

Manufacturer.

Dates of Survey while building

During progress of work in shops— 1906:— Jan 4. Feb 6. 13. 22. 26. 28. Mar 8. 9. 14. 21. 22. Apr 2. 5. 11. 19. 28. **MANAGER** *J. M. J.*

During erection on board vessel — May 3. 9. 17. 23. 24. Jun 18. 19. 20. 21. 25. 26. 30. July 7. 9. 14. 17. 18. 20. 23. 25. 26. 27. Aug 2.

Total No. of visits *39*

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

“ “ “ donkey “ “ “ *✓*

Dates of Examination of principal parts—Cylinders *21/3/06* Slides *18/6/06* Covers *21/6/06* Pistons *9/5/06* Rods *30/5/06*

Connecting rods *30/5/06* Crank shaft *17/5/06* Thrust shaft *17/5/06* Tunnel shafts *✓* Screw shaft *17/5/06* Propeller *23/5/06*

Stern tube *5/4/06* Steam pipes tested *23/7/06* Engine and boiler seatings *23/5/06* Engines holding down bolts *14/7/06*

Completion of pumping arrangements *27/7/06* Boilers fixed *17/7/06* Engines tried under steam *27/7/06*

Main boiler safety valves adjusted *2/8/06* Thickness of adjusting washers *P 5" S 5"*

Material of Crank shaft *Steel* Identification Mark on Do. *PA 2, 06* Material of Thrust shaft *Steel* Identification Mark on Do. *J.M. 3, 06*

Material of Tunnel shafts *✓* Identification Marks on Do. *✓* Material of Screw shafts *Steel* Identification Marks on Do. *J.M. 3, 06*

Material of Steam Pipes *Solid drawn copper* Test pressure *400 lbs.*

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

The Engines and Boiler of this vessel have been constructed under Special Survey, are of good material and workmanship, and have been fitted and secured on board in accordance with the Rules. They are now in good working condition and in my opinion eligible to have the notation of + L M C 8, 06 in the Register Book.

It is submitted that
this vessel is eligible for
THE RECORD *ELM.C.8.06.*

M. B. B.
30.8.06

A letter will be sent in a few days time re Bilge Suckings.

The amount of Entry Fee.	£ 1 :	When applied for,	<i>29/8/06</i>
Special	£ 12 . 18	When received,	<i>31.8.06</i>
Donkey Boiler Fee	£		
Travelling Expenses (if any)	£ . : 2		

J. M. J.
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute **TUES. 4 SEP 1906**

Assigned *+ L M C 806*

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

