

## REPORT ON MACHINERY

No. 30,227

Received at London Office  
TUE 6-NOV. 1917

Date of writing Report 29-10-17 19 When handed in at Local Office 2-11-17 19 Port of Hull  
No. in Survey held at Hull Date, First Survey 6-4-16 Last Survey 27-10-17 19  
Reg. Book. on the steel screw trawler "Hittres" (Number of Volls) Gross 261  
Master Built at Beverly By whom built Cook, Walter & Gommell Tons Net 102  
Engines made at Hull By whom made Amos Smith & Co 2823 When built 1917-10  
Boilers made at Hull By whom made Amos Smith & Co 2823 when made 1917-10  
Registered Horse Power Owners Loyal Tm Fishing Co Port belonging to Gimsby  
Nom. Horse Power as per Section 28 74 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines triple expansion No. of Cylinders three No. of Cranks 3  
Dia. of Cylinders  $2\frac{1}{2}$ " -  $2\frac{1}{2}$ " -  $35\frac{1}{2}$ " Length of Stroke 24" Revs. per minute 7.16 Material of screw shafts as per rule 7.16 as fitted 7.16  
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 34"  
Dia. of Tunnel shaft as per rule 6.4" Dia. of Crank shaft journals as per rule 6.72" Dia. of Crank pin 7" Size of Crank web  $4\frac{3}{4}$ " x  $14\frac{3}{4}$ " Dia. of thrust shaft under  
collars  $6\frac{7}{8}$ " Dia. of screw 8'-9" Pitch of Screw 11'-0" No. of Blades 4 State whether moveable no Total surface 29 sq ft  
No. of Feed pumps one Diameter of ditto  $2\frac{3}{4}$ " Stroke 12" Can one be overhauled while the other is at work  
No. of Bilge pumps one Diameter of ditto  $2\frac{3}{4}$ " Stroke 12" Can one be overhauled while the other is at work  
No. of Donkey Engines two & 2" cylinders Sizes of Pumps  $6\frac{1}{4}$ " x  $4\frac{3}{4}$ " x 6",  $6\frac{1}{4}$ " x  $6\frac{1}{4}$ " x 6" No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room two 2" dia. In Holds, &c. one 2" dia. in each compartment  
all suction also connected to cylinder  
No. of Bilge Injections one sizes 3" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 2" cylinder  
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 strong casings  
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 23-7-17 of Stern Tube 23-7-17 Screw shaft and Propeller 23-7-17  
Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record S) Manufacturers of Steel J. Spencer & Sons  
Total Heating Surface of Boilers 1267 sq ft Is Forced Draft fitted no No. and Description of Boilers one single ended  
Working Pressure 180 lb. Tested by hydraulic pressure to 360 lb. Date of test 1-3-17 No. of Certificate 3195  
Can each boiler be worked separately Area of fire grate in each boiler 37.6 sq ft No. and Description of Safety Valves to  
each boiler two spring loaded Area of each valve 4.9 sq in Pressure to which they are adjusted 185 Are they fitted with easing gear yes  
Smallest distance between boilers or uptakes and bunkers or woodwork 10" 134 lapped Mean dia. of boilers 152" Length 10'-3' $\frac{29}{32}$ " Material of shell plates steel  
Thickness  $\frac{1}{32}$ " Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double  
long. seams P.D.B. Diameter of rivet holes in long. seams  $1\frac{1}{16}$ " Pitch of rivets 7" Lap of plates or width of butt straps 15 $\frac{1}{2}$ "  
Per centages of strength of longitudinal joint rivets 91-2 Working pressure of shell by rules 180 Size of manhole in shell 16" x 12"  
Size of compensating ring 9" x  $1\frac{1}{2}$ " No. and Description of Furnaces in each boiler two plain Material steel Outside diameter 44 $\frac{1}{2}$ "  
Length of plain part top 7.8" Thickness of plates crown  $2\frac{1}{32}$ " Description of longitudinal joint welded No. of strengthening rings  
bottom 7.25" Working pressure of furnace by rules 185 Combustion chamber plates: Material steel Thickness: Sides  $1\frac{1}{16}$ " Back  $1\frac{1}{16}$ " Top  $1\frac{1}{16}$ " Bottom  $3\frac{1}{4}$ "  
Pitch of stays to ditto: Sides 10" x 7" Back 9 $\frac{1}{2}$ " x 9" Top 9 $\frac{1}{2}$ " x 7" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 191  
Material of stays steel Diameter at smallest part 2.07" Area supported by each stay 85.5 sq in Working pressure by rules 217 End plates in steam space  
Material steel Thickness  $\frac{1}{32}$ " Pitch of stays  $4\frac{1}{2}$ " x  $16\frac{1}{2}$ " How are stays secured 2.7 x 4 Working pressure by rules 187.5 Material of stays steel  
Diameter at smallest part 5.05" Area supported by each stay 268 sq in Working pressure by rules 196 Material of Front plates at bottom steel  
Thickness  $3\frac{1}{32}$ " Material of Lower back plate steel Thickness  $1\frac{1}{16}$ " Greatest pitch of stays  $13\frac{1}{4}$ " x  $9\frac{1}{2}$ " Working pressure of plate by rules 217  
Diameter of tubes  $3\frac{1}{2}$ " Pitch of tubes  $4\frac{1}{2}$ " x  $4\frac{1}{2}$ " Material of tube plates steel Thickness: Front  $3\frac{1}{32}$ " Back  $2\frac{1}{32}$ " Mean pitch of stays  $11\frac{1}{4}$ "  
Pitch across wide water spaces  $13\frac{3}{4}$ " Working pressures by rules 190 Girders to Chamber tops: Material steel Depth and  
thickness of girder at centre  $8\frac{1}{2}$ " x  $9\frac{1}{2}$ " x  $1\frac{1}{2}$ " Length as per rule 33 Distance apart  $8\frac{1}{2}$ " x  $9\frac{1}{2}$ " Number and pitch of stays in each three 7"  
Working pressure by rules 180 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



IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:— *Two top end bolts & nuts, two bottom end bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set of air feed hinge pump valves, & a quantity of bolts & nuts & iron of various sizes.*

The foregoing is a correct description,

**FOR AMOS & SMITH LTD.**

Manufacturer.

Secretary.

Dates of Survey while building { During progress of work in shops -- } 1916:— April 7, 11, 13, 18, 29 May 6, 13, 22, 27 June 3, 10, 17, 24, July 3, 11, 22, 31, Aug 5, 12, 19, 26, 26  
{ During erection on board vessel -- } Nov 1, 13, 17, 22, Dec 4, 11, 16, 19, 17:— Jan 5, 8, 13, 18, 23, 29 Feb 3, 5, 10, 12, 16, 27, Mar 1  
{ Total No. of visits } 52  
Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders 18-1-17 Slides 12-2-17 Covers 18-1-17 Pistons 3-2-17 Rods 3-2-17  
Connecting rods 12-2-17 Crank shaft 3-2-17 Thrust shaft 8-1-17 Tunnel shafts ✓ Screw shaft 1-11-16 Propeller 1-11-16  
Stern tube 19-7-17 Steam pipes tested 12-10-17 Engine and boiler seatings 28-7-17 Engines holding down bolts 15-10-17  
Completion of pumping arrangements 27-10-17 Boilers fixed 15-10-17 Engines tried under steam 27-10-17  
Main boiler safety valves adjusted 20-10-17 Thickness of adjusting washers *P 9/32 I 1 1/32*

Material of Crank shaft *Iron* Identification Mark on Do. *1706 G.A* Material of Thrust shaft *Iron* Identification Mark on Do. *1700 G.A*

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *Iron* Identification Marks on Do. *1681 G.A*

Material of Steam Pipes *solid drawn copper* ✓ Test pressure *40 lb.* ✓

Is an installation fitted for burning oil fuel *no* ✓ Is the flash point of the oil to be used over 150°F. ✓

Have the requirements of Section 49 of the Rules been complied with ✓

Is this machinery duplicate of a previous case *yes* ✓ If so, state name of vessel *Quoddian, Olympia, etc.*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel has been constructed under special survey in accordance with the approved plans & the rules of this Society, the materials & workmanship are good, the boiler & steam pipes have been tested as above & found sound & tight. The machinery has been properly fitted & secured on board the vessel & on completion was tried under full power for two hours as required by the Rules & found satisfactory. The safety valves have been adjusted under steam & tested for accumulation. In my opinion the vessel is eligible for the record + L.M.C. 10-17*

It is submitted that  
this vessel is eligible for  
THE RECORD. + L.M.C. 10.17.

The amount of Entry Fee ... £ 1 : 0 :  
Special ... £ 11 : 2 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : 3/- :  
When applied for, 5/11 1917  
When received, 30-11-1917

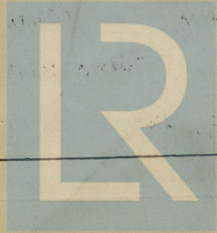
*Frank A. Sturgeon*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

Assigned

*+ L.M.C. 10.17*

MACHINERY CERTIFICATE



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Foundation