

REPORT ON MACHINERY.

No. 21567

Received at London Office

THUR. 19 AUG 1909

Date of writing Report *Aug 14 1909* When handed in at Local Office *Aug 18 1909* Port of *Hull*
 No. in Survey held at *Hull* Date, First Survey *Mar 16th* Last Survey *Aug 13th 1909*
 Reg. Book. *86* on the *Trawler YORICK* (Number of Visits *39*)
 Master *Burley* Built at *Burley* By whom built *Book, Mutton & Gemmell* Tons Gross *213* Net *78*
 Engines made at *Hull* By whom made *Amos & Smith Ltd* when made *5*
 Boilers made at *5* By whom made *5* when made *5*
 Registered Horse Power *✓* Owners *Hellgren & Son* Port belonging to *Hull*
 Nom. Horse Power as per Section 28 *45* Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *No*

ENGINES, &c.—Description of Engines

Horizontal triple expansion No. of Cylinders *3* No. of Cranks *3*
 Dia. of Cylinders *10-16-27* Length of Stroke *22* Revs. per minute *104* Dia. of Screw shaft *7.18* as per rule *7.18* Material of *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 *✓* 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 *32*
 Dia. of Tunnel shaft *5.7* as per rule *5.7* Dia. of Crank shaft journals *5.98* as per rule *5.98* Dia. of Crank pin *6.5* Size of Crank webs *12x4* Dia. of thrust shaft under
 collars *6.5* Dia. of screw *10-0* Pitch of Screw *8-6* Mean No. of Blades *4* State whether moveable *No* Total surface *384*
 No. of Feed pumps *1* Diameter of ditto *2.5* Stroke *11* Can one be overhauled while the other is at work *✓*
 No. of Bilge pumps *1* Diameter of ditto *2.5* Stroke *11* Can one be overhauled while the other is at work *✓*
 No. of Donkey Engines *2* Sizes of Pumps *5x5x5 6x3x6* No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room *2-2 (Fore & Aft)* In Holds, &c. *2-2 Main head - tallant burst*
2 Bilge suction suction to all bilges with discharge on deck
 No. of Bilge Injections *1* sizes *2.5* Connected to condenser, or to circulating pump *✓* Is a separate Donkey Suction fitted in Engine room & size *2 1/2*
 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 *Hot 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 *4.6.09* of Stern Tube *4.6.09* Screw shaft and Propeller *4.6.09*
 Is the Screw Shaft Tunnel watertight *Yes* Is it fitted with a watertight door *✓* worked from *✓*

BOILERS, &c.—(Letter for record *S*)

Manufacturers of Steel *Glenkiln & Co. Ltd. Glasgow*
 Total Heating Surface of Boilers *750* Is Forced Draft fitted *No* No. and Description of Boilers *1-5-E. Multitubular*
 Working Pressure *200* Tested by hydraulic pressure to *400* Date of test *16.7.09* No. of Certificate *1713*
 Can each boiler be worked separately *✓* Area of fire grate in each boiler *25.5* No. and Description of Safety Valves to
 each boiler *2 Spring loaded* Area of each valve *3.14* Pressure to which they are adjusted *205 lb.* Are they fitted with easing gear *Yes*
 Smallest distance between boilers or uptakes and bunkers or woodwork *4* Mean dia. of boilers *10.7* Length *9.37* Material of shell plates *Steel*
 Thickness *3/32* Range of tensile strength *28-32* Are the shell plates welded or flanged *No* Descrip. of riveting: cir. seams *SA 1/2*
 long. seams *SA 1/2* Diameter of rivet holes in long. seams *1/8* Pitch of rivets *7.61* Lap of plates or width of butt straps *16 1/2*
 Per centages of strength of longitudinal joint *100* Working pressure of shell by rules *201* Size of manhole in shell *16x12*
 Size of compensating ring *40x30x3/32* No. and Description of Furnaces in each boiler *2 plain* Material *Steel* Outside diameter *21 1/2*
 Length of plain part *6.7* Thickness of plates *1/2* Description of longitudinal joint *Welded* No. of strengthening rings *✓*
 Working pressure of furnace by the rules *228* Combustion chamber plates: Material *Steel* Thickness: Sides *3/32* Back *1/8* Top *1/8* Bottom *3/32*
 Pitch of stays to ditto: Sides *8 1/2 x 8 1/2* Back *8 1/2 x 8* Top *8 1/2 x 7 3/8* If stays are fitted with nuts or riveted heads *Yes* Working pressure by rules *239*
 Material of stays *Steel* Diameter at smallest part *1 1/2* Area supported by each stay *74.3* Working pressure by rules *249* End plates in steam space:
 Material *Steel* Thickness *1/8* Pitch of stays *12 1/2 x 12 1/2* How are stays secured *SA 1/2* Working pressure by rules *246* Material of stays *Steel*
 Diameter at smallest part *4* Area supported by each stay *169* Working pressure by rules *250* Material of Front plates at bottom *Steel*
 Thickness *1/8* Material of Lower back plate *Steel* Thickness *1/8* Greatest pitch of stays *14 x 8* Working pressure of plate by rules *234*
 Diameter of tubes *3 1/2* Pitch of tubes *4 1/2 x 4 1/2* Material of tube plates *Steel* Thickness: Front *1/8* Back *7/8* Mean pitch of stays *9 1/2 x 8 1/2*
 Pitch across wide water spaces *13 1/2* Working pressures by rules *203* Girders to Chamber tops: Material *Iron* Depth and
 thickness of girder at centre *8 1/2 x 1 1/2* Length as per rule *30.7* Distance apart *7 3/4* Number and pitch of stays in each *2 2 8 1/2*
 Working pressure by rules *232* 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

VERTICAL DONKEY BOILER— Manufacturers of Steel

No.	Description	When made	Where fixed
Made at	By whom made	No. of Certificate	Fire grate area
Working pressure	tested by hydraulic pressure to	Date of test	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
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates
Working pressure of furnace by rules	Thickness of furnace crown plates	Stayed by	Dates of survey
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	

SPARE GEAR. State the articles supplied:— *Two top & two bottom end connecting rods & nuts, two main bearing bolts, one set of coupling bolt nuts, one set of feed & high pump valves, one set of air & circulating pump valves, one main & one donkey feed check valve, assorted bolt nuts etc.*

The foregoing is a correct description,
FOR AMOS & SMITH LTD. Manufacturer.

Dates of Examination of principal parts—Cylinders 25.6.09 Slides 24.7.09 Covers 26.6.09 Pistons 22.7.09 Rods 22.7.09
 Connecting rods 25.6.09 Crank shaft 6.7.09 Thrust shaft 6.7.09 Tunnel shafts 29.5.09 Propeller 29.5.09
 Stern tube 29.5.09 Steam pipes tested 30.7.09 Engine and boiler seatings 4.6.09 Engines holding down bolts 30.7.09
 Completion of pumping arrangements 13.8.09 Boilers fixed 20.7.09 Engines tried under steam 5.8.09
 Main boiler safety valves adjusted 5.8.09 Thickness of adjusting washers $P \frac{4}{32} 5 \frac{5}{16}$
 Material of Crank shaft Steel Identification Mark on Do. 555 JWG Material of Thrust shaft Steel Identification Mark on Do. 6.7.09 JWG
 Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Iron Identification Marks on Do. 29.5.09 JWG
 Material of Steam Pipes Solid Brass Copper Test pressure 400 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery & boiler of this vessel have been constructed under special survey, are of good material & workmanship & have been tested & found to be in accordance with the Rules. They are now in good working condition & eligible in my opinion to have run of L. M. C. 8.09 in the Register Book.*

It is submitted that
 this vessel is eligible for
THE RECORD. + L M C 8,09

JWR
 19.8.09
 #ED.
 19.8.09

The amount of Entry Fee .. £ 1 : 2 : 0
 Special .. £ 8 : 0 : 0
 Donkey Boiler Fee .. £ : :
 Travelling Expenses (if any) £ : : 2 : 0

Committee's Minute

Assigned

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

PHL 20 100 1909

+ L M C 8,09

MACHINERY CERTIFICATE
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