

REPORT ON MACHINERY.

No. 18141

Port of Hull

Received at London Office

FRI. 27

JUL 1906

No. in Survey held at Selby & Hull Date, first Survey Apr. 20th Last Survey July 10th 1906
 Reg. Book. 198 on the Screw Trawler "Vesper" (Number of Visits 19)
 Master Built at Selby By whom built Cochrane & Sons Tons { Gross 264
 Engines made at Hull By whom made Charles D. Holmes & Co when made 1906 Net 118
 Boilers made at do By whom made do when made 1906
 Registered Horse Power 69 Owners White & Willows Port belonging to Grimby
 Nom. Horse Power as per Section 28 69 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 12 1/2", 22", 35" Length of Stroke 24" Revs. per minute 112 Dia. of Screw shaft 7 1/4" as per rule 7 1/4" 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 yes 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 36"
 Dia. of Tunnel shaft 6 1/4" as per rule 6 1/4" Dia. of Crank shaft journals 6 1/4" as per rule 6 1/4" Dia. of Crank pin 7" Size of Crank webs 13 1/2" x 4 1/2" Dia. of thrust shaft under
 collars 7" Dia. of screw 8 1/2" Pitch of Screw 11-0" No. of Blades 4 State whether moveable No Total surface 28.5 sq. ft.
 No. of Feed pumps 1 Diameter of ditto 2 1/8" Stroke 24" Can one be overhauled while the other is at work ✓
 No. of Bilge pumps 1 Diameter of ditto 2 1/8" Stroke 24" Can one be overhauled while the other is at work ✓
 No. of Donkey Engines One Sizes of Pumps 2 1/4" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two 2" dia In Holds, &c. Three 2" dia.
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 1/2" 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 Hold 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 7/5/06 of Stern Tube 7/5/06 Screw shaft and Propeller 7/5/06
 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 Coy of Scotland Ltd.
 Total Heating Surface of Boilers 1104 sq. ft. Forced Draft fitted No No. and Description of Boilers One T.E. type, Hull
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 19.6.06 No. of Certificate 1478
 Can each boiler be worked separately ✓ Area of fire grate in each boiler 35 sq. ft. No. and Description of Safety Valves to
 each boiler Two direct spring Area of each valve 3.97" Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 6" Mean dia. of boilers 12-6" Length 10-0" Material of shell plates Steel
 Thickness 1 1/2" Range of tensile strength 29-32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams bx. lap
 long. seams bx. lap Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 7" Lap of plates or width of butt straps 15"
 Per centages of strength of longitudinal joint rivets 86 Working pressure of shell by rules 185 lbs Size of manhole in shell 16" x 12"
 Size of compensating ring 7" x 1 1/2" No. and Description of Furnaces in each boiler Two plain Material Steel Outside diameter 4-3"
 Length of plain part 5-10" Thickness of plates 1 1/2" Description of longitudinal joint Welded No. of strengthening rings ✓
 Working pressure of furnace by the rules 185 lbs Combustion chamber plates: Material Steel Thickness: Sides 2 3/32" Back 1/16" Top 2 3/32" Bottom 2 3/32"
 Pitch of stays to ditto: Sides 9" x 8 1/2" Back 9" x 8 1/2" Top 8 1/2" x 8 3/4" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 213 lbs
 Material of stays Steel Diameter at smallest part 1 1/2" x 1 3/4" Area supported by each stay 105" Working pressure by rules 204 lbs End plates in steam space:
 Material Steel Thickness 1 1/2" Pitch of stays 17 1/2" x 17 1/2" How are stays secured by nuts & washers Working pressure by rules 185 lbs Material of stays Steel
 Diameter at smallest part 6-21" Area supported by each stay 306" Working pressure by rules 202 lbs Material of Front plates at bottom Steel
 Thickness 7/8" Material of Lower back plate Steel Thickness 1 5/16" Greatest pitch of stays 15" Working pressure of plate by rules 198 lbs
 Pitch of tubes 3 1/4" Pitch of tubes 4 5/8" x 4 3/4" Material of tube plates Steel Thickness: Front 7/8" Back 7/8" Mean pitch of stays 9 1/2" x 9 1/4"
 Thickness of girder at centre 15" Working pressures by rules 180 lbs Girders to Chamber tops: Material Iron Depth and
 Working pressure by rules 193 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 ✓

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,

Charles O'Sullivan Manufacturer.

Dates { During progress of work in shops - 1906: - Apr 20. 26. May 1. 3. 7. 10. 11. 18. Jun 7. 16. 19. 21. 25. 28. July 2. 3. 4. 5. 10
 of Survey { During erection on board vessel -
 while building { Total No. of visits 19

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

Dates of Examination of principal parts—Cylinders 16/6/06 Slides 25/6/06 Covers 25/6/06 Pistons 21/6/06 Rods 21/6/06
 Connecting rods 21/6/06 Crank shaft 25/6/06 Thrust shaft 25/6/06 Tunnel shafts ✓ Screw shaft 3/5/06 Propeller 7/5/06
 Stern tube 3/5/06 Steam pipes tested 3/7/06 Engine and boiler seatings 7/5/06 Engines holding down bolts 28/6/06
 Completion of pumping arrangements 5/7/06 Boilers fixed 2/7/06 Engines tried under steam 5/7/06
 Main boiler safety valves adjusted 5/7/06 Thickness of adjusting washers *F 5/16" A 1/4"*
 Material of Crank shaft *Iron* Identification Mark on Do. *257 LLOYDS* Material of Thrust shaft *Iron* Identification Mark on Do. *257 LLOYDS*
 Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *Iron* Identification Marks on Do. *257 LLOYDS*
 Material of Steam Pipes *Solid drawn copper* Test pressure *360 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 7. 06 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD *ILM.C. 7. 06.*

W. S. P. 28.7.06
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Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee.. £ 1 : - : -
 Special £ 10 : 7 : -
 Donkey Boiler Fee £ - : - : -
 Travelling Expenses (if any) £ - : - : -

Committee's Minute TUES. 31 JUL 1906

Assigned

MACHINERY CERTIFICATE WRITTEN.



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