

# YACHT REPORT ON MACHINERY.

No. <sup>10522</sup> 30242

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Date of writing Report 10/6/11 When handed in at Local Office 10/6/11 Port of Glasgow

No. in Survey held at Clydebank Date, First Survey 12<sup>th</sup> Dec 1910 Last Survey 12<sup>th</sup> June 1911

Reg. Book. on the *Stul Twin screw steam yacht Seannette* (Number of Visits)

Master Built at Clydebank By whom built J. Brown & Co. Ltd. Tons { Gross 921 Net 290

Engines made at Clydebank By whom made J. Brown & Co. Ltd. when made 1911

Boilers made at do By whom made do when made 1911

Registered Horse Power Owners H. Livesey Port belonging to Glasgow.

Nom. Horse Power as per Section 28 281 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

**ENGINES, &c.**—Description of Engines *Twin screw triple expansion* No. of Cylinders 8 No. of Cranks 4 each Eng

Dia. of Cylinders 16-26-30-30 Length of Stroke 26 Revs. per minute 170 Dia. of Screw shaft as per rule 8.39 Material of steel as fitted 8.7 screw shaft

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 yes If two liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 3'-5"

Dia. of Tunnel shaft as per rule 7.8 Dia. of Crank shaft journals as per rule 8.2 Dia. of Crank pin 8.5 Size of Crank webs 16 1/2 x 6 Dia. of thrust shaft under collars 8.5 Dia. of screw 9'-3" Pitch of Screw 10'-3" No. of Blades 4 State whether moveable yes Total surface 28 sq ft

No. of Feed pumps 2 Weirs Diameter of ditto 10 1/2-8 Stroke 21 Can one be overhauled while the other is at work yes

No. of Bilge pumps 1 each Eng Diameter of ditto 3 1/4 Stroke 13 Can one be overhauled while the other is at work yes

No. of Donkey Engines 3 Sizes of Pumps 1 Duplex 6.5 x 8 1 5.5 x 10 1 4.4 x 5 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 3 of 2 1/2" In Holds, &c. Fore peak 1 of 2 1/2" Crew space 1 of 2 1/2" Dunker 1 of 2 1/2" Tunnel 1 of 2 1/2"

No. of Bilge Injections 2 sizes 4" Connected to condenser, or to circulating pump *each* Is a separate Donkey Suction fitted in Engine room & size yes 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 none

Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both

Are they sized 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 below

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 bilge How are they protected wood 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 29.3.11 of Stern Tube 29.3.11 Screw shaft and Propeller 29.3.11

Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from upper deck

**BOILERS, &c.**—(Letter for record 5) Manufacturers of Steel D Colville Sons

Total Heating Surface of Boilers 3163 sq ft Is Forced Draft fitted yes No. and Description of Boilers One single ended

Working Pressure 180 lbs Test by hydraulic pressure to 360 lbs Date of test 16.2.11 No. of Certificate 10803

Can each boiler be worked separately Area of fire grate in each boiler 91.9 sq ft No. and Description of Safety Valves to each boiler 3 spring loaded Area of each valve 11.04 sq in 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 9" Mean dia. of boilers 14'-6" Length 11'-6" Material of shell plates steel

Thickness 1 1/32 Range of tensile strength 29/33 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams DR-TR lap long. seams DBS-TR Diameter of rivet holes in long. seams 1 3/8 Pitch of rivets 9/16 Lap of plates or width of butt straps 1'-8 1/4

Per centages of strength of longitudinal joint rivets 85.9 plate 85.6 Working pressure of shell by rules 185 Size of manhole in shell 21 x 14

Size of compensating ring 40 x 33 x 1 1/32 No. and Description of Furnaces in each boiler 4 Morrison Material steel Outside diameter 49 1/8

Length of plain part top Thickness of plates crown 19 bottom 32 Description of longitudinal joint welded No. of strengthening rings

Working pressure of furnace by the rules 192 Combustion chamber plates: Material steel Thickness: Sides 19/32 Back 9/16 Top 19/32 Bottom 3/4

Pitch of stays to ditto: Sides 8 x 8 1/4 Back 7 1/2 x 8 3/8 Top 8 x 8 3/8 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 182

Material of stays steel Diameter at smallest part 1.62" Area supported by each stay 67 sq in Working pressure by rules 214 End plates in steam space:

Material steel Thickness 1 3/32 Pitch of stays 14 x 14 How are stays secured DN Working pressure by rules 182 Material of stays steel

Diameter at smallest part 5.94 Area supported by each stay 289 sq in Working pressure by rules 213 Material of Front plates at bottom steel

Thickness 27/32 Material of Lower back plate steel Thickness 3/4 Greatest pitch of stays 15" doubled Working pressure of plate by rules 260

Diameter of tubes 3 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates steel Thickness: Front 3/4 Back 3/4 Mean pitch of stays 10 5/8

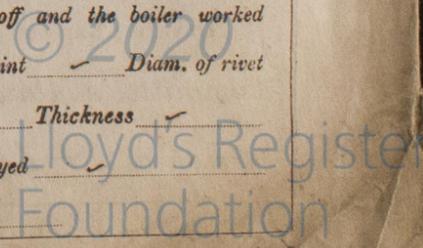
Pitch across wide water spaces 14" doubled Working pressures by rules 183 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 2 plates 8 7/8 x 3/4 Length as per rule 32 1/2 Distance apart 8 3/8 Number and pitch of stays in each 3 of 8"

Working pressure by rules 190 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**

No. \_\_\_\_\_ Description \_\_\_\_\_ Manufacturers of Steel \_\_\_\_\_  
 Made at \_\_\_\_\_ By whom made \_\_\_\_\_  
 Working pressure \_\_\_\_\_ tested by hydraulic pressure to \_\_\_\_\_ Date of test \_\_\_\_\_ When made \_\_\_\_\_ Where fixed \_\_\_\_\_  
 Valves \_\_\_\_\_ No. of Safety Valves \_\_\_\_\_ Area of each \_\_\_\_\_ No. of Certificate \_\_\_\_\_ Fire grate area \_\_\_\_\_ Description of Safety \_\_\_\_\_  
 If fitted with casing gear \_\_\_\_\_ If steam from main boilers can enter the donkey boiler \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ Date of adjustment \_\_\_\_\_  
 Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_ Range of tensile strength \_\_\_\_\_ Dia. of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_  
 Dia. of rivet holes \_\_\_\_\_ Whether punched or drilled \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Descrip. of riveting long. seams \_\_\_\_\_ Rivets \_\_\_\_\_  
 Working pressure of shell by rules \_\_\_\_\_ Thickness of shell crown plates \_\_\_\_\_ Lap of plating \_\_\_\_\_ Per centage of strength of joint \_\_\_\_\_ Plates \_\_\_\_\_  
 Diameter of furnace Top \_\_\_\_\_ Bottom \_\_\_\_\_ Length of furnace \_\_\_\_\_ Radius of do. \_\_\_\_\_ No. of stays to do. \_\_\_\_\_ Dia. of stays \_\_\_\_\_  
 Working pressure of furnace by rules \_\_\_\_\_ Thickness of furnace crown plates \_\_\_\_\_ Thickness of furnace plates \_\_\_\_\_ Description of joint \_\_\_\_\_ Stayed by \_\_\_\_\_  
 Diameter of uptake \_\_\_\_\_ Thickness of uptake plates \_\_\_\_\_ Thickness of water tubes \_\_\_\_\_ Radius of do. \_\_\_\_\_ Dates of survey \_\_\_\_\_

**SPARE GEAR.** State the articles supplied:— 2 top end, 2 bottom end, 2 main bearing and set of coupling bolts and nuts - set of bilge pump valves - set of Weiss feed pump valves - air pump rod - set of HP, MP, LP piston rings and springs - 2 propeller blades and 6 studs - 2 pairs bottom end brasses - 1 pair top end brasses - 1 eccentric strap & valve spindle - 4 check valves, assorted iron.

The foregoing is a correct description.

**FOR JOHN BROWN & Co. LIMITED** Manufacturers.

Dates of Survey while building: During progress of work in shops - \_\_\_\_\_ Assistant Secretary \_\_\_\_\_  
 During erection on board vessel - 24. 28. March 1. 7. 8. 10. 15. 17. 23. 29. 31. Apr 3. 10. 18. 21. 24. 26. May 2. 4. 9. 10.  
 Total No. of visits: 17. 23. 25. 30. June 1.

Dates of Examination of principal parts—Cylinders 7-2-11 6-24-11 Slides 7-3-11

|   |   |                                       |                                    |  |                   |
|---|---|---------------------------------------|------------------------------------|--|-------------------|
| Connecting rods 24-2-11                   | Crank shaft 16-2-11                       | Thrust shaft 1-2-11                   | Tunnel shafts 1-2-11               | Screw shaft 7-2-11                         | Propeller 14-3-11 |
| Stern tube 8-3-11                         | Steam pipes tested 24-2-11 4-5-11         | Engine and boiler seatings 23-3-11    | Engines holding down bolts 18-4-11 | Engines tried under steam 25-5-11 + 1-6-11 |                   |
| Completion of pumping arrangements 4-5-11 | Main boiler safety valves adjusted 9-5-11 | Boilers fixed 2-5-11                  | Engines holding down bolts 18-4-11 | Engines tried under steam 25-5-11 + 1-6-11 |                   |
| Material of Crank shaft <i>steel</i>      | Identification Mark on Do. 4451 TD        | Material of Thrust shaft <i>steel</i> | Identification Mark on Do. 408 HC  | Test pressure 540 lbs                      |                   |
| Material of Tunnel shafts <i>steel</i>    | Identification Marks on Do. 408 HC        | Material of Screw shafts <i>steel</i> | Identification Mark on Do. 408 HC  |  |                   |
| Material of Steam Pipes <i>steel</i>      |   |                                       |                                    |  |                   |

**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 rules and approved plans enclosed and has been run working under steam satisfactorily.  
 Materials and workmanship are good.

The machinery of this vessel is eligible in my opinion to be classed +LMC-6-11

It is submitted that this vessel is eligible for THE RECORD +LMC6.11

ISB & IAUXSB. ED. JWD 13/6/11

|                                |                           |
|--------------------------------|---------------------------|
| The amount of Entry Fee .. £   | When applied for, 31/6/11 |
| Special .. £                   | When received, 9/6/11     |
| Donkey Boiler Fee .. £ 34      |                           |
| Travelling Expenses (if any) £ |                           |

Committee's Minute Glasgow 13 JUN. 1911  
 Assigned +LMC6.11

Harry Clarke  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

We certify  
 John Brown & Co.  
 Assistant Secretary.



Certificate (if required) to be sent to Glasgow

If not made whether, and when, one will be sent

If a Report also sent on the Hull of the Ship