

REPORT ON MACHINERY.

No. 71202
THUR 19 NOV 1908

Date of writing Report 16th Nov 1908 When handed in at Local Office 19 Port of London

No. in Survey held at Gt Yarmouth Date, First Survey Jan 3/1906 Last Survey 14th Nov 1908
Reg. Book. on the Machinery of Twin steam tug "Consort" (Number of Visits)

Master Built at Selby By whom built Cockayne Sons Tons { Gross 133.16
Net 39.34
When built 1908

Engines made at Gt Yarmouth By whom made Crabtree H & Co when made 1908.11
Boilers made at South Shields By whom made J. Y. Eltingham & Co when made 1907.12

Registered Horse Power Owners J. Constant Port belonging to London

Nom. Horse Power as per Section 28 72 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

GINES, &c.—Description of Engines Twin Compound surface condensing No. of Cylinders two 6.28 No. of Cranks two

Dia. of Cylinders 14" x 28" Length of Stroke 18" Revs. per minute 120 Dia. of Screw shaft as per rule 6.24" Material of steel
as fitted 6.6" screw shaft

Is the screw shaft fitted with a continuous liner the whole length of the stern tube no liners 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 2'-4"

Dia. of Tunnel shaft as per rule 5.5" Dia. of Crank shaft journals as per rule 5.78" Dia. of Crank pin 6 1/4" Size of Crank webs 9 x 3 1/2 x 4 Dia. of thrust shaft under
as fitted 6" collars 6 1/4" Dia. of screw 7'-0" Pitch of Screw 10'-0" No. of Blades 3 State whether moveable no Total surface 18.55

No. of Feed pumps one on each Diameter of ditto 2 1/8" Stroke 9" Can one be overhauled while the other is at work
No. of Bilge pumps one on each Diameter of ditto 2 1/8" Stroke 9" Can one be overhauled while the other is at work
No. of Donkey Engines one double ended Sizes of Pumps 2 1/4, 3, 6" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room one 2" In Holds, &c. one in each compartment 2" diam

No. of Bilge Injections two sizes 3" Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes 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 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 none How are they protected

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 30.9.08 of Stern Tube at Selby Screw Shaft and Propeller 30.9.08

Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door worked from

OILERS, &c.—(Letter for record) Manufacturers of Steel

Total Heating Surface of Boilers 12887 Is Forced Draft fitted no No. and Description of Boilers one single ended

Working Pressure 130 lbs Tested by hydraulic pressure to Date of test No. of Certificate

Can each boiler be worked separately Area of fire grate in each boiler 487 No. and Description of Safety Valves to
each boiler two spring loaded Area of each valve 79" Pressure to which they are adjusted 135 lbs Are they fitted with easing gear yes

Smallest distance between boilers on uptakes and bunkers on woodwork 7 1/2" Mean dia. of boilers Length Material of shell plates

Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

Long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Per centages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell

Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space:

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

Thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each

Working pressure by rules 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				
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 end bolts & nuts, two bottom end bolts & nuts, two main bearing bolts, one set of coupling bolts, one set of feed & bilge pump valves, a quantity of bolts & nuts & iron of various sizes

ORABTREE & CO., LTD.
W. F. Crabtree
MANAGING DIRECTOR

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building	During progress of work in shops - -	1906 Jan 31. May 15. July 26	1907 Jan 16	1908 July 23. 29.
	During erection on board vessel - -	Aug 13. 30. Sep 10. 18. 19. 30	Nov 14.	
	Total No. of visits	13.	Is the approved plan of main boiler forwarded herewith	

Dates of Examination of principal parts—		Cylinders 20.8.08	Slides 20.8.08	Covers 20.8.08	Pistons 20.8.08	Rods 23.7.08
Connecting rods 23.7.08	Crank shaft 23.7.08	Thrust shaft 23.7.08	Tunnel shafts 13.8.08	Screw shaft 13.8.08	Propeller 13.8.08	
Stern tube 29.7.08	Steam pipes tested 23.10.08	Engine and boiler seatings 30.9.08	Engines holding down bolts 13.11.08			
Completion of pumping arrangements 13.11.08		Boilers fixed 13.11.08	Engines tried under steam 14.11.08			
Main boiler safety valves adjusted 13.11.08		Thickness of adjusting washers 7/16 P 2 9/16 S				
Material of Crank shaft Steel	Identification Mark on Do. 1624 G.W.P.	Material of Thrust shaft Steel	Identification Mark on Do. 1624 G.W.P.			
Material of Tunnel shafts Steel	Identification Marks on Do. 2036 A.T.G.	Material of Screw shafts Steel	Identification Marks on Do. 2120 15			
Material of Steam Pipes Copper	Test pressure 260 see Hull report					

General Remarks (State quality of workmanship, opinions as to class, &c. These Engines have been constructed under special survey in accordance with the rules the material has been tested & the workmanship is good. They have been satisfactorily fitted on board & on completion were tried under steam with satisfactory results. The safety valves adjusted to 135 lbs under steam

In my opinion the Machinery of this vessel is eligible to be classed & to have record + L.M.C. 11.08 in the Register Book

It is submitted that this vessel is eligible for THE RECORD. F.L.M.C 11.08

FRANK L. STURGEON
19.11.08

The amount of Entry Fee	£ 1 : 0 :	When applied for,
Special	£ 7 : 4 :	19.11.08
Donkey Boiler Fee	£ :	When received,
Travelling Expenses (if any)	£ 5 : 2 : 6	24.12.1908

Committee's Minute FRI. 20 NOV 1908

Assigned + L.M.C. 11.08

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

