

REPORT ON MACHINERY.

No. 10877

FRI. 3 DEC. 1920

Received at London Office

MIDDLESBRO

Writing Report

18

When handed in at Local Office

19

Port of

Survey held at Stockton-on-TeesDate, First Survey 23rd June/20 Last Survey 23rd Nov 1920

Book.

on the Steel Screw Steamer ETHEL RADCLIFFE(S.S. N^o 196)Tons { Gross 567.3
Net 345.6Master M. MathiasBuilt at StocktonBy whom built Craig Taylor & Co LimWhen built 1920Lines made at StocktonBy whom made Thos Blair & Co Lim (N^o 1871)when made 1920Machinery made at StocktonBy whom made Thos Blair & Co Limwhen made 1920

Registered Horse Power

Owners Anthony Radcliffe & S. CoffinPort belonging to LondonHorse Power as per Section 28 471Is Refrigerating Machinery fitted for cargo purposes noIs Electric Light fitted yes

MACHINES, &c.—Description of Engines

Twin-compoundNo. of Cylinders 3No. of Cranks 3No. of Cylinders 28-46-75Length of Stroke 48Revs. per minute 57

Dia. of Screw shaft

as per rule 15.09Material of IronThe 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

the propeller boss yes If the liner is in more than one length are the joints burned in one If the liner does not fit tightly at the partbetween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive tight fit If twoare fitted, is the shaft lapped or protected between the liners yesLength of stern bush 5'-6"

Dia. of Tunnel shaft

as per rule 13.67

Dia. of Crank shaft journals

as per rule 14.36Dia. of Crank pin 15 1/4"Size of Crank webs 29 1/2" x 9 1/2"

Dia. of thrust shaft under

lars 15 1/4"Dia. of screw 18'-0"Pitch of Screw 18'-10 1/2"No. of Blades 4State whether moveable noTotal surface 104 1/2No. of Feed pumps 2Diameter of ditto 3 1/2"Stroke 34"Can one be overhauled while the other is at work yesNo. of Bilge pumps 2Diameter of ditto 5"Stroke 34"Can one be overhauled while the other is at work yesNo. of Donkey Engines 4Sizes of Pumps 2 Ballast = 8 x 9 x 10 1/2 10 x 12 x 12

No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 2 @ 3 1/2"Boiler Room 2 @ 3 1/2"In Holds, &c. 2 @ 3 1/2" in each hold except aftermostNo. of Bilge Injections 1size 8"Connected to condenser for circulating pump yesIs a separate Donkey Suction fitted in Engine room & size yes - 4"Are all the bilge suction pipes fitted with roses yesAre the roses in Engine room always accessible yesAre the sluices on Engine room bulkheads always accessible noneAre all connections with the sea direct on the skin of the ship yesAre they Valves or Cocks bothAre the Discharge Pipes above or below the deep water line aboveAre they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yesAre the Blow Off Cocks fitted with a spigot and brass covering plate yesAre they each fitted with a Discharge Valve always accessible on the plating of the vessel yesHow are they protected wood ceilingThat pipes are carried through the bunkers suctions to forward holdsAre all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yesAre the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yesDates of examination of completion of fitting of Sea Connections 27.9.20of Stern Tube 1.9.20Screw shaft and Propeller 7.10.20Is the Screw Shaft Tunnel watertight in hull R.H.Is it fitted with a watertight door yesworked from top platform

MILERS, &c.—(Letter for record. (S))

Manufacturers of Steel Thos John Spencer & Sons LimTotal Heating Surface of Boilers 7917Is Forced Draft fitted noNo. and Description of Boilers 3 single endedWorking Pressure 180Tested by hydraulic pressure to 360Date of test 27.9.20No. of Certificate 6158Can each boiler be worked separately yesArea of fire grate in each boiler 65.9 1/2

No. and Description of Safety Valves to

each boiler 2 direct springArea of each valve 8.29Pressure to which they are adjusted 185 lbsAre they fitted with easing gear yesSmallest distance between boilers on uptakes and bunkers on woodwork 3'-0"Mean dia. of boilers 16'-0"Length 11'-6"Material of shell plates steelThickness 1 1/2"Range of tensile strength 28-32Are the shell plates welded or flanged noDescrip. of riveting: cir. seams 2 R. lapLong. seams 2 B-3 RivDiameter of rivet holes in long. seams 1 1/8"Pitch of rivets 9 1/2"Lap of plates or width of butt straps 19 5/8 x 1 3/4"Size of manhole in shell 16" x 12"

Per centages of strength of longitudinal joint

plate 85.62Working pressure of shell by rules 183Size of compensating ring 7 5/8 x 1 1/2"No. and Description of Furnaces in each boiler 3 Brighton

Length of plain part

top 37"bottom 64"Description of longitudinal joint WeldNo. of strengthening rings 13Working pressure of furnace by the rules 192Combustion chamber plates: Material steelThickness: Sides 1 1/2"Back 1 1/2"Top 1 1/2"Bottom 1 1/2"Pitch of stays to ditto: Sides 9 3/4" x 8 3/4"Back 9 3/4" x 9"Top 9" x 8 1/2"If stays are fitted with nuts or riveted heads nutsWorking pressure by rules 185

End plates in steam space:

Material of stays steelDiameter at smallest part 1.99Area supported by each stay 87.18Material of stays steelThickness 1 1/4"Pitch of stays 18 1/2" x 18"How are stays secured nuts & washersWorking pressure by rules 193Material of stays steelDiameter at smallest part 7.24Area supported by each stay 383Working pressure by rules 198Material of Front plates at bottom steelThickness 1"Material of Lower back plate steelThickness 1"Greatest pitch of stays 14" x 9"Working pressure of plate by rules 250Diameter of tubes 3 1/2"Pitch of tubes 4 3/4" x 4 3/8"Material of tube plates steelThickness: Front 1 1/2"Back 1 1/2"Mean pitch of stays 11 1/2"Pitch across wide water spaces 14 1/2"Working pressures by rules 192Girders to Chamber tops: Material steel

Depth and

thickness of girder at centre 8 1/2" x 1"Length as per rule 33 3/4"Distance apart 9"Number and pitch of stays in each 30 @ 8 1/2"Working pressure by rules 191Superheater 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

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

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

Foundation

W35-0033

If so, is a report now forwarded? Yes Indb # 10757

Writing Report 27.7

FOR BLAIR & Co., LIMITED,

Manufacturer.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " " yes

Connecting rods 20.9.20 Crank shaft 10.9.20 Thrust shaft 20.7.20 Tunnel shafts { 31.8.20 2
3.9.20 Screw shafts 1.10.20 Propeller { 1.10.
4.10.

Completion of pumping arrangements 23. 11. 20 Boilers fixed 5. 11. 20 Engines tried under steam 5. 11. 20

Material of Crank shaft Ing Steel Identification Mark on Do. 7275 Material of Thrust shaft Ing Steel Identification Mark on Do. 4989

Material of Tunnel shafts Ing Steel Identification Marks on Do. 4989 Material of Screw shafts iron Identification Marks on Do. 7273

Material of Steam Pipes solid drawn copper (5" x 1/4") Test pressure 400 lbs.

Is an installation fitted for burning oil fuel. See note 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.....~~no~~..... If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c. _____)

Note: - With a view to carrying oil fuel, if desired at any future time, all the water ballast pipes in the double bottom and machinery space have been fitted of iron with machined flanges and cardboard joints and the stokehold and engine room platforms have been made of iron to the exclusion of wood.

The machinery of this vessel has been built under special survey. The materials and workmanship are sound and good. The boilers were tested by hydraulic pressure and the engines and boilers examined under steam and all found satisfactory.

The machinery is now in a good and safe working condition and renders the
 vessel eligible in my opinion to have the notation of ∇ LMC-11-20 in the Register Book.

It is submitted that
this vessel is eligible for
DEM RDOUSD. + LMC. 11.20

The vessel is fitted with Electric Light and Wireless

The amount of Entry Fee ... £	3 - 0 - 0	When applied for,	
Special ... £	43 - 11 - 0	29/11/20	1920
Donkey Boiler Fee ... £	1 - - -	When received, <u>Dist.</u>	W ^m Morrison
Travelling Expense (if any) £	- - -	1/12/20	1920

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

Committee's Minute _____
Assigned _____

Certificate (if required) to be sent to MIDDLEBURY

5a.

Writing Report 27.7

in Survey held at

Book.

on the

es made at

es made at *Stoc*

ered Horse Power

LTITUBULAR

er for record (5)

rs *One single*

f Certificate *6143*

valves to each boiler

ey fitted with easing gear

est distance between boi

rial of shell plates *m*

ip. of riveting: cir. sea

of plates or width of bu

181 Size of m

3 Brighton

ription of longitudinal joi

s Material *steel* Th

7 x 7 1/2 If stays are fit

est part *1.73* Area su

of stays *17 x 15* How

supported by each stay

64 Port *Ste*

We request the

Wm Taylor & Co

pecially Surveyed while

We hereby engag

For boilers up to 200

Horse Power, one shill

above 200. The Nomina

than £2 2s.

MEM.—In exception

all cases where travelling

to be defrayed by the p

5255

is request is made upon

ign Shipping, which pr

e the Committee use their be

that neither the Committee no

ort or certificate issued by the S

for any error of judgment, def

Secretary,

Lloyd's Register of Br

fty values adjs

Survey Fee ...

Travelling Expenses (if a

ommittee's Minute

igned

Register

ation