

REPORT ON MACHINERY.

No. 43837

Received at London Office WED JUL 16 1924

Date of writing Report

10

When handed in at Local Office

14. 7.

10 24 Port of

Glasgow.

No. in
Reg. Book.

Survey held at Coatbridge Glasgow & Dundee.

Date, First Survey

25th January

Last Survey

1st July

1924

on the

Hull N^o 289.

Tons

Gross

Net

Master

Built at

Dundee.

By whom built

Caledon S B & E L. Ltd.

When built

1924

Engines made at

Coatbridge

By whom made

W^m Beardmore & Co. Ltd N^o 604/5

when made

1924

Boilers made at

Parkhead

By whom made

" " " " 140/1

when made

1924

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28

139

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

ENGINES, &c.—Description of Engines

Twin screw Triple expansion

No. of Cylinders

6

No. of Cranks

6

Dia. of Cylinders

12" 20" 33"

Length of Stroke

23"

Revs. per minute

Dia. of Screw shaft

7.05

4.35

Material of

steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

No

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

No

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

Yes

(3 lines see London letter 16-8-24)

Length of stern bush

31"

Dia. of Tunnel shaft

as per rule 6.24

6.03 New Rule

as per rule 6.58

6.33

Dia. of Crank shaft journals

as per rule 6.34

Dia. of Crank pin

6 3/4"

Size of Crank webs

4 1/2 x 3

Dia. of thrust shaft under

collars

6 3/4"

Dia. of screw

8-6"

Pitch of Screw

9'-9"

No. of Blades

4

State whether moveable

No

Total surface

28 1/2'

No. of Feed pumps

4

Diameter of ditto

2 1/2"

Stroke

11 1/2"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

4

Diameter of ditto

2 1/2"

Stroke

11 1/2"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

Sizes of Pumps

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

In Engine Room

In Holds, &c.

No. of Bilge Injections

sizes

Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine room & size

Are all the bilge suction pipes fitted with roses

Are the roses in Engine room always accessible

Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship

Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Are the Discharge Pipes above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

Are the Blow Off Cocks fitted with a spigot and brass covering plate

What pipes are carried through the bunkers

How are they protected

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Is the Screw Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

BOILERS, &c.—(Letter for record

8)

Manufacturers of Steel

W^m Beardmore & Co. Ltd.

Total Heating Surface of Boilers

2492

Is Forced Draft fitted

No

No. and Description of Boilers

Two Single ended.

Working Pressure

180 lbs.

Tested by hydraulic pressure to

320

Date of test

15-5-24

ST 2

No. of Certificate

16512

Can each boiler be worked separately

Area of fire grate in each boiler

39.4

No. and Description of Safety Valves to

each boiler

Area of each valve

Pressure to which they are adjusted

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork

Mean dia. of boilers

12'-0"

Length

10'-0"

Material of shell plates

Steel

Thickness

1"

Range of tensile strength

28/32

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

D.R.L.

long. seams

T.R.D.B.S.

Diameter of rivet holes in long. seams

1 5/32

Pitch of rivets

4 9/8

Top of plates or width of butt straps

16 7/8"

Per centages of strength of longitudinal joint

rivets 95.5

plate 84.83

Working pressure of shell by rules

190

Size of manhole in shell

19" x 15"

Size of compensating ring

10" x 1 1/2"

No. and Description of Furnaces in each boiler

2 Deighton

Material

S.

Outside diameter

3'-5 1/2"

Length of plain part

top

bottom

Thickness of plates

crown 14/32

bottom

Description of longitudinal joint

Weld

No. of strengthening rings

✓

Working pressure of furnace by the rules

184

Combustion chamber plates: Material

S.

Thickness: Sides

3/4"

Back

23/32"

Top

3/4"

Bottom

3/4"

Pitch of stays to ditto: Sides

9" x 9"

Back

9" x 9"

Top

9" x 9"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

218

Material of stays

S.

DIA. OVER THREADS

Area at smallest part

1 5/8"

Area supported by each stay

83.25

Working pressure by rules

182

End plates in steam space:

✓

Material

S.

Thickness

1 1/32"

Pitch of stays

14" x 15 1/2"

How are stays secured

Double nuts

Working pressure by rules

200

Material of stays

Steel

DIA. OVER THREADS

Area at smallest part

2 5/8"

Area supported by each stay

263.5

Working pressure by rules

209

Material of Front plates at bottom

Steel

Thickness

1 1/2"

Material of Lower back plate

Steel

Thickness

1 1/32"

Greatest pitch of stays

14 1/2" x 9"

Working pressure of plate by rules

241

Diameter of tubes

3 1/2"

Pitch of tubes

4 5/8" x 4 5/8"

Material of tube plates

Steel

Thickness: Front

1 1/32"

Back

24/32"

Mean pitch of stays

11 1/8"

Pitch across wide water spaces

14 1/2"

Working pressures by rules

219

Girders to Chamber tops: Material

S.

Depth and

thickness of girder at centre

2-4 1/8" x 3/4"

Length as per rule

2-4 1/8"

Distance apart

9"

Number and pitch of stays in each

2-9 1/4"

Working pressure by rules

201

Steam dome: description of joint to shell

None fitted

% of strength of joint

✓

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

SUPERHEATER. Type

✓

Date of Approval of Plan

Tested by Hydraulic Pressure to

Date of Test

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve

Pressure to which each is adjusted

Is Easing Gear fitted

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

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IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

WILLIAM BEARDMORE & CO., LIMITED

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } 1/24 Jan 25. 31 Feb 12. 15. 18. 19. 26 Mar 7. 10. 13. 20. 25 Apr 2. 4. 7. 12. 14. 17. 29 May 1. 15. 20. 23. 26. 29 Jun 2. 4. 6. 14. 19. 26 July 1. 7.
{ During erection on board vessel - - - }
Total No. of visits 33

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 29/4/24 Slides 26/5/24 Covers 29/4/24 Pistons 26/5/24 Rods 6/6/24

Connecting rods 26/5/24 Crank shaft 14/4/24 Thrust shaft 6/6/24 Tunnel shafts 26/5/24 Screw shaft 14/6/24 Propeller 14/6/24

Stern tube 6/6/24 Steam pipes tested Engine and boiler seatings Engines holding down bolts

Completion of pumping arrangements Boilers fixed Engines tried under steam

Completion of fitting sea connections Stern tube Screw shaft and propeller

Main boiler safety valves adjusted Thickness of adjusting washers

Material of Crank shaft Steel Identification Mark on Do. 343 JD Material of Thrust shaft Steel Identification Mark on Do. 344 JA

Material of Tunnel shafts Steel Identification Marks on Do. 343/4 JD Material of Screw shafts Steel Identification Marks on Do. 343/4 JA

Material of Steam Pipes Test pressure

Is an installation fitted for burning oil fuel 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 If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery has been built

under special survey in accordance with the approved plans and the rules of this society.

The materials and workmanship are good.

The machinery has been shipped to Dundee for fitting on board the vessel. Dundee Surveyor notified.

In my opinion this vessel will be eligible for second of + TMC (with date) when the machinery has been fitted on board the vessel and tried under steam with satisfactory results.

The amount of Entry Fee ... £ 3 : 0 : 0 When applied for, 15/7/24.
Special 3/5 ... £ 13 : 18 : 0
Donkey Boiler Fee ... £ 16 : 12 : 0
Travelling Expenses (if any) £ : : : When received, 14/10/24

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned Deferred

FRI. 26 SEP 1924
FRI. 3 OCT 1924

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