

## REPORT ON MACHINERY.

No. 28892

Date of writing Report

10

When handed in at Local Office

20 AUG 1924

Received at London Office

21 AUG 1924

No. in Survey held at  
Reg. Book.

Sunderland

Port of

Sunderland

Date, First Survey 6 May 24 Last Survey 19 Aug 24

(Number of Vistas 17

Gross

Master

Built at Hoboken

By whom built Antwerp Eng Co Ltd (No 83)

Tons

Net

When built 1924

Engines made at Sunderland

By whom made N.E. Marine Eng Co Ltd (No 2558)

when made 1924

Boilers made at Sunderland

By whom made N.E. Marine Eng Co Ltd (No 2558)

when made 1924

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28

214

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

ENGINES, &amp;c.—Description of Engines Triple expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 20" 33" 54" Length of Stroke 36"

Revs. per minute 80

Dia. of Screw shaft as per rule 11.38

Material of screw shaft 1. steel

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

If two

liners are fitted, is the shaft lapped or protected between the liners

Length of stern bush 3' 10 1/2"

Dia. of Tunnel shaft as per rule 9.93"

as fitted 10 1/2"

Dia. of Crank shaft journals as per rule 10.4"

as fitted 10 5/8"

Dia. of Crank pin 10 5/8"

Size of Crank webs 16 1/2"

Dia. of thrust shaft under

collars 10 5/8"

Dia. of screw 14 1/2"

Pitch of Screw 13'-9"

No. of Blades 4

State whether moveable no

Total surface 63 sq ft

No. of Feed pumps 2

Diameter of ditto 3"

Stroke 21"

Can one be overhauled while the other is at work yes

No. of Bilge pumps 2

Diameter of ditto 3 1/2"

Stroke 21"

Can one be overhauled while the other is at work yes

No. of Donkey Engines 2

Sizes of Pumps 9 1/2" 10" 10" 6 1/4" x 6"

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

In Engine Room

In Holds, &amp;c.

No. of Bilge Injections 2

Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine room &amp; 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

Dates of examination of completion of fitting of Sea Connections

of Stern Tube

Screw shaft and Propeller

Is the Screw Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

BOILERS, &amp;c.—(Letter for record (S))

Manufacturers of Steel

Steel Company of Scotland &amp; David Beith &amp; Co Ltd.

Total Heating Surface of Boilers 36220 sq ft

Is Forced Draft fitted no

No. and Description of Boilers Two single ended marine

Working Pressure 180

Tested by hydraulic pressure to 320

Date of test 29-7-24

No. of Certificate 3892

Can each boiler be worked separately

Area of fire grate in each boiler 46 sq ft

No. and Description of Safety Valves to

each boiler Two direct spring

Area of each valve 5.93 sq ft

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 14'-0"

Length 10'-6"

Material of shell plates steel

Thickness 1 1/4"

Range of tensile strength 28-32 tons

Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams DR

long. seams DBSTR

Diameter of rivet holes in long. seams 1 3/16"

Pitch of rivets 8 7/16"

Lap of plates or width of butt straps 1'-5 3/4"

Per centages of strength of longitudinal joint

rivets 88.63

plate 85.92

Working pressure of shell by rules 182

Size of manhole in shell 16" x 12"

Size of compensating ring flanged

No. and Description of Furnaces in each boiler 3 house

Material steel

Outside diameter 3'-1"

Length of plain part top

Thickness of plates crown

bottom 3 1/2"

Description of longitudinal joint welded

No. of strengthening rings

Working pressure of furnace by the rules 182

Combustion chamber plates: Material steel

Thickness: Sides 3/32"

Back 25/32"

Top 23/32"

Bottom 23/32"

Pitch of stays to ditto: Sides 10 1/2" x 9 1/2"

Back 10 1/2" x 11 1/2"

Top 9 1/2" x 9"

If stays are fitted with nuts or riveted heads nuts

Working pressure by rules 181

Material of stays steel

Diameter at smallest part 2.030"

Area supported by each stay 100.60"

Working pressure by rules 180

End plates in steam space

Material steel

Thickness 1 1/4"

Pitch of stays 2'-0" x 7 3/8"

How are stays secured DTRW

Working pressure by rules 180

Material of stays steel

Diameter at smallest part 7.660"

Area supported by each stay 428.950"

Working pressure by rules 183

Material of Front plates at bottom steel

Thickness 7/8"

Material of Lower back plate steel

Thickness 7/8"

Greatest pitch of stays 15 1/2" x 10 1/2"

Working pressure of plate by rules 183

Diameter of tubes 3 1/4"

Pitch of tubes 4 3/4" x 4 1/2"

Material of tube plates steel

Thickness: Front 7/8"

Back 25/32"

Mean pitch of stays 11"

Pitch across wide water spaces 1'-3" (25/32")

Working pressures by rules 191

Girders to Chamber tops: Material steel

Depth and

thickness of girder at centre 20 1/4" x 3 1/2"

Length as per rule 2'-6 1/2"

Distance apart 9'

Number and pitch of stays in each 20 9 1/2"

Working pressure by rules 185

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 rivets

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

Lloyd's Register

Foundation

003200-003207-0091



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LTD

C. T. Adams. Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1924 May 6 22 June 6 12 14 July 17 29 31 Aug 7 14 19  
During erection on board vessel - - - - -  
Total No. of visits 17

Is the approved plan of main boiler forwarded herewith yes

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 9-7-24 Slides 7-8-24 Covers 18-7-24 Pistons 23-7-24 Rods 31-7-24

Connecting rods 18-7-24 Crank shaft 18-7-24 Thrust shaft 23-7-24 Tunnel shafts 23-7-24 Screw shaft 31-7-24 Propeller 1-7-24

Stern tube 23-7-24 Steam pipes tested Engine and boiler seatings Engines holding down bolts

Completion of pumping arrangements Boilers fixed Engines tried under steam

Main boiler safety valves adjusted Thickness of adjusting washers

Material of Crank shaft I. Steel Identification Mark on Do. LLOYD'S N° 6869

Material of Thrust shaft I. Steel Identification Mark on Do. LLOYD'S N° 6869

Material of Tunnel shafts I. Steel Identification Marks on Do. L.C.D. data as above

Material of Screw shafts I. Steel Identification Marks on Do. L.C.D. data as above

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 yes If so, state name of vessel "Dunston" (Sld Rpt N° 28785)

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

The materials and workmanship are good

The machinery was constructed under special survey and is about to be sent to Hoboken to be fitted in the vessel

The amount of Entry Fee ... £ 4 :

Special fee ... £ 42 : 16

Donkey Boiler Fee ... £ 10 : 14

Travelling Expenses (if any) £ :

When applied for,

20 AUG 1924

When received,

15-9-1924

C. T. Adams.

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

Committee's Minute

TUES. 28 OCT 1924

Assigned



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