

Rpt. 4.

REPORT ON MACHINERY.

No. 44482

Date of writing Report

4th March 1925

When handed in at Local Office

7th March 1925

Received at London Office

11 MAR 1925

Port of GLASGOW.

No. in Survey held at
Reg. Book.

Paisley

Date, First Survey

26.11.24

Last Survey

2nd March 1925

on the Twin Screw Triple Expansion Engines — Messrs. Campbell & Calderwood

(Number of Visits)

No. 1034

Tons { Gross
Net

When built

Master

Built at

By whom built

Engines made at

Paisley

By whom made

Messrs. Campbell & Calderwood

when made

1925

Boilers made at

By whom made

(No. 1034)

when made

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

ENGINES, &c.—Description of Engines

Vertical Twin Screw Triple Expansion

No. of Cylinders

6

No. of Cranks

6

No. of Cylinders

9 1/2", 15" & 24 3/4"

Length of Stroke

15"

Revs. per minute

256

Dia. of Screw shaft

as per rule

Material of

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

Is the after end of the liner made water tight

the propeller boss

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

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

Length of stern bush

Dia. of Tunnel shaft

as per rule 4" 4.3

Dia. of Crank shaft journals

as per rule 4" 6.5

Dia. of Crank pin

5"

Size of Crank webs

9 1/4" x 3 3/8"

Dia. of thrust shaft under

Diam. of screw

4 7/8"

Pitch of Screw

No. of Blades

State whether moveable

Total surface

No. of Feed pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Bilge pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Donkey Engines

Sizes of Pumps

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

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

MILLERS, &c.—(Letter for record

Manufacturers of Steel

Total Heating Surface of Boilers

Is Forced Draft fitted

No. and Description of Boilers

Working Pressure

180 lbs./in.²

Tested by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately

Area of fire grate in each boiler

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

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

Percentage 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

Area 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

Area 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

Steam dome: description of joint to shell

% 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

W103-0182

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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,

Campbell Calderwood & Co. Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1924. Nov 26. Dec 1-15. 1925. Jan. 12-22. Feb 3-11. 18. 20-23. Mar 2. During erection on board vessel --- Total No. of visits 11.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 18, 20+23-2-25 Slides 11-2-25 Covers 20+23-2-25 Pistons 11-2-25 Rods 2-3-25

Connecting rods 11-2-25 Crank shafts 2-3-25 Thrust shafts 2-3-25 Tunnel shafts Screw shaft Propeller

Stern tube 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 shafts steel Identification Mark on Do. Material of Thrust shafts steel Identification Mark on Do.

Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Identification Marks on Do.

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 (up to and including the thrust shaft)

General Remarks (State quality of workmanship, opinions as to class, &c. These engines have been built under

Special Survey in accordance with the Rules. The material & workmanship are good. They are intended for shipment to Hong Kong to be installed in a vessel being built there.

The amount of Entry Fee ... £ : : When applied for, Special ... £ 6 : - : 10/3/24. Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) £ : : 2/0/25

J. D. Boyle Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 6 NOV 1925

Committee's Minute GLASGOW 10 MAR 1925

Assigned TRANSMIT TO LONDON



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