

REPORT ON MACHINERY.

No. 44292

Received at London Office

14 JAN 1925

Date of writing Report 30-12-1924 When handed in at Local Office 12-1-1925

Port of Glasgow

No. in Survey held at Dalmin, Glasgow, Coatbridge

Date, First Survey 30-7-24

Last Survey 29-12-1924

Reg. Book.

8285 on the Stiel Swin Screw

CASANDRA

(Number of Visits 19)

Master

Built at Dalmin

By whom built Wm Beardmore & Co. Ltd.

When built 1924

Engines made at Coatbridge

By whom made Wm Beardmore & Co. Ltd.

when made 1924

Boilers made at Glasgow

By whom made Wm Beardmore & Co. Ltd.

when made 1924

Registered Horse Power 252

Owners Curacaoische Scheep Maats

Port belonging to Heilumstad

Nom. Horse Power as per Section 28 252

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted No

ENGINES, &c.—Description of Engines

Swin screw, Triple Expansion

No. of Cylinders 6

No. of Cranks 6

Dia. of Cylinders 14"-23"-38"

Length of Stroke 27"

Revs. per minute 158

Dia. of Screw shaft

as per rule 7.714"

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 No

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 No

If two

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

Oil gland fitted

Length of stern bush 34"

Dia. of Tunnel shaft

as per rule 7.117"

Dia. of Crank shaft journals

as per rule 7.47"

Dia. of Crank pin 7 3/4"

Size of Crank webs 6" x 3 3/8"

Dia. of thrust shaft under

collars 7 3/4"

Dia. of screw 8'-9"

Pitch of Screw 8'-0"

No. of Blades 4

State whether moveable No

Total surface 28 sq

No. of Feed pumps 2

Diameter of ditto 5"

Stroke 4 1/4"

Can one be overhauled while the other is at work No

No. of Bilge pumps 2

Diameter of ditto 5"

Stroke 4 1/4"

Can one be overhauled while the other is at work No

No. of Donkey Engines 2

Sizes of Pumps 6" x 8 1/2" x 18"

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

In Engine Room 1-3", 2-2 1/2", 3-3"

General Service

7 1/2" x 5" x 6"

In Holds, &c. Pump Room 3-4"

Lore Hold 1-3 1/2"

No. of Bilge Injections 6

sizes 7 1/2"

Connected to condenser, or to circulating pump No

Is a separate Donkey Suction fitted in Engine room & size No-3"

Are all the bilge suction pipes fitted with roses No

Are the roses in Engine room always accessible No

Are the sluices on Engine room bulkheads always accessible No

Are all connections with the sea direct on the skin of the ship No

Are they Valves or Cocks Both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates No

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 No

Are the Blow Off Cocks fitted with a spigot and brass covering plate No

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 No

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges No

Is the Screw Shaft Tunnel watertight No

Is it fitted with a watertight door

worked from

BOILERS, &c.—(Letter for record 3)

Manufacturers of Steel (Plates) Wm Beardmore & Co. Ltd.

(Steynham) David Colville & Son

25B.

Total Heating Surface of Boilers 4150 sq

Is Forced Draft fitted No

No. and Description of Boilers Two single ended return tube

Working Pressure 180 lbs

Tested by hydraulic pressure to 320 lbs

Date of test 30-10-24

No. of Certificate 16643

Can each boiler be worked separately No

Area of fire grate in each boiler Oil fired

No. and Description of Safety Valves

each boiler 2- Direct Spring

Area of each valve 12.5 sq

Pressure to which they are adjusted 185 lbs

Are they fitted with easing gear No

Smallest distance between boilers or uptakes and bunkers or woodwork 5'-0"

Int. dia. of boilers 13'-0"

Length 12'-3"

Material of shell plates Steel

Thickness 1 5/16"

Range of tensile strength 28/12 tons

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 1/4"

Pitch of rivets 8 1/2"

Length of plates or width of butt straps 18 5/16"

Per centages of strength of longitudinal joint

rivets 96%

Working pressure of shell by rules 184 lbs

Size of manhole in shell 16" x 12"

Size of compensating ring 6" x 15 3/32"

No. and Description of Furnaces in each boiler Two Morrison

Material Steel

Outside diameter 3'-6 1/8"

Length of plain part top

Thickness of plates crown 9 1/16"

Description of longitudinal joint welded

No. of strengthening rings

Working pressure of furnace by the rules 193 lbs

Combustion chamber plates: Material Steel

Thickness: Sides 7/8" Back 3/4" Top 7/8" Bottom 7/8"

Pitch of stays to ditto: Sides 9 7/8" x 8 1/2"

Back 8 1/2" x 8 1/2"

Top 9 7/8" x 9"

If stays are fitted with nuts or riveted heads No

Working pressure by rules 185 lbs

Material of stays Steel

Area at smallest part 1 3/4" x 1 3/4"

Area supported by each stay 68 sq

Working pressure by rules 185 lbs

End plates in steam space:

Material Steel

Thickness 1 3/32"

Pitch of stays 18"

How are stays secured screwed through plate

Working pressure by rules 180 lbs

Material of stays Steel

Area at smallest part 3 1/4" x 2 3/4"

Area supported by each stay 324 sq

Working pressure by rules 212 lbs

Material of Front plates at bottom Steel

Thickness 1 5/16"

Material of Lower back plate Steel

Thickness 1 3/16"

Greatest pitch of stays 14" x 18"

Working pressure of plate by rules 200 lbs

Diameter of tubes 2 1/2"

Pitch of tubes 4"

Material of tube plates Steel

Thickness: Front 15/16"

Back 3/4"

Mean pitch of stays 9 1/4"

Pitch across wide water spaces 14"

Working pressures by rules 204 lbs

Girders to Chamber tops: Material Steel

Depth and

thickness of girder at centre 2-8" x 3/4"

Length as per rule 2-9"

Distance apart 9"

Number and pitch of stays in each 2-9 7/8"

% of strength of joint

Working pressure by rules 186 lbs

Steam dome: description of joint to shell

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

IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:— *1 Section of crank shaft, 1 Propeller shaft, 2 Cast-iron Propellers, 1 eccentric strap & chain complete, 1 Engine guide shoe, 1 set of piston rings for one engine, 1 Piston rod, 1 Valve spindle complete, 1 pair Locomotive and one pair Bottom end brasses with bolts & nuts complete, 1 Lead pump plunger & valves, 1 Blige pump plunger & valves, 1 set of coupling bolts & nuts, 2 main bearing bolts and nuts, 1 Spring of each size used, Assorted bolts & nuts. Iron of various sizes.*

The foregoing is a correct description,

W. Thomson

Manufacturer.

Dates of Survey while building: During progress of work in shops -- *1924 July 30 Sep 8. 18. 30 Oct 8. 15. 21. 24 Nov 3. 13. 17. 19. 20 Dec 5. 9. 11. 17. 23. 29*
During erection on board vessel -- *Boilers. 1924 July 9. 16. Aug 15. 27. Sept 8. 17. 26. Oct 3. 10. 16. 23. 28. 30 Nov 4. 7. 11. 14. 24. Dec 7.*
Total No. of visits *Eng 19 Reas 19*

Is the approved plan of main boiler forwarded herewith *yes*

" " " donkey " " " *none*

Dates of Examination of principal parts—Cylinders *20-9-24* Slides *2-11-24* Covers *30-9-24* Pistons *3-11-24* Rods *12-11-24*

Connecting rods *12-11-24* Crank shafts *30-9-24* Thrust shafts *2-11-24* Tunnel shafts *2-11-24* Screw shafts *12-11-24* Propellers *2-11-24*

Stern tubes *2-11-24* Steam pipes tested *5-12-24* Engine and boiler seatings *12-11-24* Engines holding down bolts *17-12-24*

Completion of pumping arrangements *23-12-24* Boilers fixed *28-11-24* Engines tried under steam *29-12-24*

Completion of fitting sea connections *17-11-24* Stern tubes *17-11-24* Screw shafts and propellers *17-11-24*

Main boiler safety valves adjusted *23-12-24* Thickness of adjusting washers *Port Boiler 3/8" F. 3/4" A. Starb. Boiler 3/8" F. 3/4" A.*

Material of Crank shafts *steel* Identification Mark on Do. *724 38* Material of Thrust shaft *steel* Identification Mark on Do. *730 38*

Material of Tunnel shafts *steel* Identification Marks on Do. *724 38* Material of Screw shafts *steel* Identification Marks on Do. *724 38*

Material of Steam Pipes *steel* Test pressure *540 lbs. p. s.* Spare crank shaft *730 38*

Is an installation fitted for burning oil fuel *yes* Is the flash point of the oil to be used over 150°F. *yes*

Have the requirements of Section 49 of the Rules been complied with *yes*

Is this machinery duplicate of a previous case *yes* If so, state name of vessel *SS "CONCHITA", SS "CARLOTA"*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel*

so far has been built under Special Survey in accordance with the

approved plans and the Rules of the Society.

The materials and workmanship are good.

The machinery has been well built & well fitted on board the vessel

and tried under full power with satisfactory results.

This vessel is eligible, in our opinion, to have record of Survey

+ L.M.C. 12.24, with notation: Fitted for oil fuel 12.24, flash point

above 150°F. and T.S. 12.24 &c. in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 12.24. CL. FD.

Fitted for oil fuel 12.24, F.P. above 150°F.

The amount of Entry Fee ... £ 4 : 0 :
Special ... £ 37 : 13 :
Donkey Boiler Fee ... £ 26 : 3 :
Travelling Expenses (if any) £ : :
When applied for, 12/11/25
When received, 16/12/25

Committee's Minute

Assigned + LMC 12.24 FD.

Fitted for oil fuel 12.24 F.P. above 150°F.

Engineer Surveyor to Lloyd's Register of Shipping.



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