

# REPORT ON MACHINERY

No. 11650

Received at London Office TUE. 24 JUL. 1923

Date of writing Report 23.7.23 When handed in at Local Office 23.7.23 Port of MIDDLESBRO

No. in Survey held at Middlesbrough Date, First Survey 13.10.1919 Last Survey 19.4.1923

Reg. Book. on the Steel Screw Steamer LA CRESCENTA (S.S.N. 8)

Tons Gross 5880.19 Net 3531.444 When built

Master Built at Middlesbrough By whom built Furness S. B. Co. Ltd

Engines made at Middlesbrough By whom made Richardson Wigham & Co. Ltd when made 7.23

Boilers made at 80 By whom made 80 (N. 2598) when made 7.23

Registered Horse Power Owners The Crescent Navigation Co. Ltd Port belonging to London

Nom. Horse Power as per Section 28 573 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

## ENGINES, &c.—Description of Engines Inverted Triple Expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 27-45-75 Length of Stroke 51 Revs. per minute 73 Dia. of Screw shaft as per rule 14.8 Material of W. Iron as fitted 15.5 screw shaft

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 in one 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 Length of stern bush 5'-2"

Intermediate as per rule 13.17 Dia. of Tunnal shaft as fitted 13.74 Dia. of Crank shaft journals as per rule 14.35 as fitted 14.98 Dia. of Crank pin 15" Size of Crank webs 29x9 3/4 Dia. of thrust shaft under collars 15 1/4 Dia. of screw 17-9" Pitch of Screw 18'-0" No. of Blades 4 State whether moveable no Total surface 100 sq

No. of Feed pumps 2 Wiers Diameter of ditto 8-10 1/2 Stroke 21 Can one be overhauled while the other is at work yes (Independent)

No. of Bilge pumps 2 Diameter of ditto 4 1/4 Stroke 27 Can one be overhauled while the other is at work yes

No. of Donkey Engines 4 Sizes of Pumps Ballast 10x12-10 Fuel 8x6x8 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 5 @ 3 1/2" Oil Transfer 7x7x8

In Engine Room 5 @ 3 1/2" In Holds, &c. 2 @ 3 1/2" in fore hold connected to forward hatch; 1 @ 2 1/2" and 2 @ 4" in Pump Room: One 2 1/2" suction to fore peak

No. of Bilge Injections one size 8" Connected to condenser or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes - 3 1/2"

Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes Are the sluices on Engine room bulkheads always accessible none

Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes 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 yes Are the Blow Off Cocks fitted with a spigot and brass covering plate yes

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 yes

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

Dates of examination of completion of fitting of Sea Connections 14.12.22 of Stern Tube 14.12.22 Screw shaft and Propeller 7.5.23

Is the Screw Shaft Tunnel watertight Ketchy All Is it fitted with a watertight door worked from

## BOILERS, &c.—(Letter for record (S)) Manufacturers of Steel James John Spencer & Sons Ltd

Total Heating Surface of Boilers 8580 Is Forced Draft fitted yes No. and Description of Boilers 3 Single Ended

Working Pressure 180 lb. Tested by hydraulic pressure to 360 lb. Date of test 29-11-20 No. of Certificate 6182

Can each boiler be worked separately yes Area of fire grate in each boiler 62.5 sq No. and Description of Safety Valves to each boiler 2 Direct Spring Area of each valve 12.56 Pressure to which they are adjusted 185 lb. Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 2'-8" Internal dia. of boilers 15'-6 1/2" Length 12'-1 1/2" Material of shell plates Steel

Thickness 1 1/4" Range of tensile strength 28-32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams 2 Riv lap

long. seams 2 Riv: Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 1/2" Lap of plates or width of butt straps 17 1/2"

Per centages of strength of longitudinal joint rivets 86.08 plate 85.29 Working pressure of shell by rules 181 lb. Size of manhole in shell 16 1/2" x 15"

Size of compensating ring 30 1/2" x 29" No. and Description of Furnaces in each boiler 3 Dighton Material steel Outside diameter 49 1/2"

Length of plain part top 19" bottom 32" Thickness of plates crown 19" bottom 32" Description of longitudinal joint Weld No. of strengthening rings

Working pressure of furnace by the rules 190 lb. Combustion chamber plates: Material Steel Thickness: Sides 19/32 Back 11/16 Top 19/32 Bottom 23/32

Pitch of stays to ditto: Sides 7 1/2" x 6 5/8" Back 8 3/8" x 8" Top 7 7/8" x 6 5/8" If stays are fitted with nuts or riveted heads Riveted heads Working pressure by rules 180

Material of stays Steel Diameter at smallest part 1 1/8" Area supported by each stay 49 Working pressure by rules 193 End plates in steam space

Material Steel Thickness 1 1/8" Pitch of stays 19 1/2" x 15 1/2" How are stays secured Ribs & Washers Working pressure by rules 192 Material of stays Steel

Diameter at smallest part 6.1 Area supported by each stay 316 sq Working pressure by rules 206 Material of Front plates at bottom Steel

Thickness 15/16" Material of Lower back plate steel Thickness 13/16" Greatest pitch of stays 19 3/4" x 8" Working pressure of plate by rules 181

Diameter of tubes 2 1/2" Pitch of tubes 3 3/4" x 3 3/4" Material of tube plates Steel Thickness: Front 1/16" Back 1/16" Mean pitch of stays 10 3/8"

Pitch across wide water spaces 13 1/2" Working pressures by rules 185 lb. Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 8 1/4" x 1 1/2" Length as per rule 32 3/4" Distance apart 7 7/8" Number and pitch of stays in each 3 @ 6 5/8"

Working pressure by rules 198 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 rivet

holes 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

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Lloyd's Register Foundation  
W624-0017

IS A DONKEY BOILER FITTED? *no* If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— *C.I. Propeller, Screw shaft, 1 set of Bolts & nuts for coupling, 2 Connecting rod top end bolts & nuts, 2 bottom end bolts & nuts, 2 Main bearing bolts and nuts, 1 set of rings and springs for H.P. piston, 12 Junk ring bolts, Centrifugal pump Impeller shaft, 1 set of feed pump valves, 1 set of bilge pump valves, 1/2 set Air pump valves, 1 Main and 1 Auxiliary feed Check Valve, 1 Filter bucket, 2 Safety Valve Springs, Crank shaft gauge, A quantity of sheet and round iron bolts & nuts and minor gear.*

The foregoing is a correct description,  
 HARRISON, WESTGARTH & Co., Ltd.

Manufacturer.

Dates of Survey while building	During progress of work in shops --	1919 Oct 13 28 Nov 6 12 14 17 19 24 Dec 1 12 17 24 (1920) Jan 10 Feb 16 20 27 Mar 1 3 6 8 12 22 29 Apr 16 20
		26 30 May 13 14 15 28 June 2 8 11 16 18 22 July 2 13 24 26 Aug 9 Sept 16 22 27 30 Oct 5 13 14 26 Nov 3 9 21
		21 17 22 24 25 29 Dec 2 9 13 16 20 30 (1921) Jan 2 12 20 23 Feb 2 21 Mar 2 7 11 14 16 30 Apr 11 13 14 20 21 27
During erection on board vessel --	Total No. of visits	24 May 2 10 11 19 22 24 25 June 1 3 9 13 14 17 22 27 29 July 1 7 11 14 22 Aug 3 4 29 Sept 1 Oct 1 10 19 24 27 (1922) Sept 5 (1923) Apr 20 May 2 2 15 29 June 2 13 18 20 25 26 July 3 5 6 13 16 17 18
		133
		Is the approved plan of main boiler forwarded herewith <input checked="" type="checkbox"/>

Dates of Examination of principal parts—Cylinders *14.6.21* Slides *22.7.21* Covers *11.5.21* Pistons *9.6.21* Rods *9.6.21*  
 Connecting rods *10.5.21* Crank shaft *17.5.21* Thrust shaft *10.10.21* Tunnel shafts *10.10.21* Screw shaft *Apr 14.7.21* Propeller *7.7.21*  
 Stern tube *16.3.22* Steam pipes tested *16.2.22* Engine and boiler seatings *14.12.22* Engines holding down bolts *7.5.23*  
 Completion of pumping arrangements *18.6.23* Boilers fixed *22.6.23* Engines tried under steam *22.6.23*  
 Main boiler safety valves adjusted *22.6.23* Thickness of adjusting washers *PB P-16; SB S-17; Aft B S-24*  
 Material of Crank shaft *Ing Steel* Identification Mark on Do. *6171 AB* Material of Thrust shaft *Ing Steel* Identification Mark on Do. *4861 N*  
 Material of Tunnel shafts *Ing Steel* Identification Marks on Do. *5695 N* Material of Screw shafts *Iron* Identification Marks on Do. *6315 RDS*  
 Material of Steam Pipes *1 Lap welded iron & 3 solid Br Steel* Test pressure *540 lbs*  
 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 *S.S. Citta di Messina*  
*S.S. ZISS - Indt Rpt N-11073*

General Remarks (State quality of workmanship, opinions as to class, &c.)  
*The machinery of this vessel has been built under Special Survey: The material 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 in a good and safe working condition and renders the vessel eligible in our opinion to have the notations of LMC 7-23 and Fitted for oil fuel 7-23 FP above 150°F*  
*Vessel placed in Dry dock. The propeller after end of stern bush, and the fastenings of the sea connections were examined and found to be in good order.*

It is submitted that this vessel is eligible for THE RECORD. + LMC 7.23. FD. CL. Fitted for oil fuel 7.23. FP above 150° F.

The amount of Entry Fee ...	£ 6 0 0	When applied for, 23 July 1923
Special ...	£ 103 13 0	
Donkey Boiler Fee ...	£	
Travelling Expenses (if any) &	£	

*Wm Morrison & Co. E. E. Wilks*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *FRI. JUL 27 1923*  
 Assigned *+ LMC 7.23 FD CL*  
*Fitted for oil fuel 7.23 FP above 150°F*

