

# REPORT ON MACHINERY.

Nuc. No. 53878  
Mdb. No. 5318

Port of Newcastle

Received at London Office **MON. 16 DEC. 1907**

Survey held at Newcastle

Date, first Survey 5<sup>th</sup> July 1907 Last Survey 4<sup>th</sup> Dec. 1904

Book. S/S Crespin

(Number of Visits 24)

Built at Middlesbrough

By whom built Raylton Dixon & Co.

Tons } Gross  
          } Net  
When built 1904

Engines made at Newcastle

By whom made H. G. M. Eng. Co. Ld.

when made 1904

Boilers made at "

By whom made "

when made 1904

Registered Horse Power

Owners Booth S.S. Co. Ld.

Port belonging to Liverpool

Horse Power as per Section 28 408

Is Refrigerating Machinery fitted for cargo purposes no.

Is Electric Light fitted yes

**PROPPELLERS, &c.—Description of Engines S/C.P.D.**

No. of Cylinders 3 No. of Cranks 3

No. of Cylinders 25 Length of Stroke 48" Revs. per minute 64 Dia. of Screw shaft 14.1 Material of screw shaft Iron

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 yes

Is 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 no If two liners are fitted, is the shaft lapped or protected between the liners no Length of stern bush 5' 6"

Dia. of Tunnel shaft 12.64 Dia. of Crank shaft journals 13.3 Dia. of Crank pin 14 Size of Crank webs 27.9 Dia. of thrust shaft under rollers 14 Dia. of screw 17.5 Pitch of Screw 17.5 No. of Blades 4 State whether moveable M Total surface 86 sq ft

No. of Feed pumps 2 Diameter of ditto 3.75 Stroke 2.4 Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 3.75 Stroke 2.4 Can one be overhauled while the other is at work yes

No. of Donkey Engines 4 Sizes of Pumps 10x12x10; 6x7x7; 5.3x10 No. and size of Suctions connected to both Bilge and Donkey pumps 2 of 3.5"

In Engine Room 4 of 3.5" In Holds, &c. 2 of 3.5" in each hold and in deep tank one of 3" in tunnel

No. of Bilge Injections 1 sizes 8" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size yes 3.5"

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 yes

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 no How are they protected no

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 7.10.07 of Stern Tube 7.10.07 Screw shaft and Propeller 24.10.07

Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from upper grating

**BOILERS, &c.—(Letter for record R) Manufacturers of Steel J. Spencer & Sons Ld.**

Total Heating Surface of Boilers 5702 Is Forced Draft fitted yes No. and Description of Boilers 2 S.C.

Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 13.9.07 No. of Certificate 7588

Can each boiler be worked separately yes Area of fire grate in each boiler 64 sq ft No. and Description of Safety Valves to each boiler 2 Spring Area of each valve 11.04 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 20" Mean dia. of boilers 16.32 Length 11.8 Material of shell plates S

Thickness 1.52 Range of tensile strength 28.5-32 Are the shell plates welded or flanged ENAS Descrip. of riveting: cir. seams dr. r. col. long. seams d. bulks Diameter of rivet holes in long. seams 1.2 Pitch of rivets 10 Lap of plates or width of butt straps 2.13

Per centages of strength of longitudinal joint 84.2 Working pressure of shell by rules 214 lb Size of manhole in shell 16" x 12"

Size of compensating ring flange No. and Description of Furnaces in each boiler 3 Deigh Material S Outside diameter 4' 2.5"

Length of plain part top Thickness of plates bottom Description of longitudinal joint weld No. of strengthening rings no

Working pressure of furnace by the rules 223 Combustion chamber plates: Material S Thickness: Sides 3.5 Back 3.5 Top 3.5 Bottom 1.8

Pitch of stays to ditto: Sides 10" x 9 Back 10" x 9 Top 10" x 9 If stays are fitted with nuts or riveted heads nut Working pressure by rules 197

Material of stays S Diameter at smallest part 2.36 Area supported by each stay 90 Working pressure by rules 196 End plates in steam space: Material S Thickness 1.76 Pitch of stays 24.11 How are stays secured d. nut Working pressure by rules 186 lb Material of stays S

Diameter at smallest part 8.48 Area supported by each stay 423 Working pressure by rules 208 Material of Front plates at bottom S

Thickness 1.52 Material of Lower back plate S Thickness 3.5 Greatest pitch of stays 15" Working pressure of plate by rules 185

Diameter of tubes 2.5 Pitch of tubes 3.75 x 3.75 Material of tube plates S Thickness: Front 7.5 Back 1.6 Mean pitch of stays 4.2

Pitch across wide water spaces 15" Working pressures by rules 182 Girders to Chamber tops: Material S Depth and thickness of girder at centre 9" x 12" Length as per rule 31.2 Distance apart 9" Number and pitch of stays in each 2 @ 10"

Working pressure by rules 200 lb Superheater or Steam chest; how connected to boiler no Can the superheater be shut off and the boiler worked separately no

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