

REPORT ON MACHINERY.

Received at London Office

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Date of writing Report 19 When handed in at Local Office 7.2.25 Port of GLASGOW.

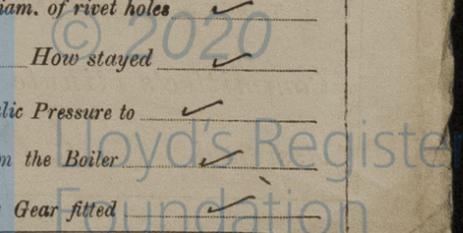
No. in Survey held at Glasgow Date, First Survey 14.3.24 Last Survey 5-2-1925
 Reg. Book 5092 on the Steel Screw Steamer "FENDRIS" (Number of Visits 46)
 Master [Signature] Built at Glasgow By whom built A. & J. Inglis Ltd. (N° 689 P.) Tons Gross 1309 Net 774
 Engines made at Glasgow By whom made A. & J. Inglis Ltd. (N° 689 P.) when made 1925
 Boilers made at do. By whom made do. (do.) when made 1925
 Registered Horse Power [Blank] Owners J. & P. Hutchison Ltd. Port belonging to Glasgow
 Nom. Horse Power as per Section 28 143 145 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple expansion, surface condensing No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 16.27 & 44 ins Length of Stroke 33 ins Revs. per minute 90 Dia. of Screw shaft 9.23 Material of screw shaft 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 yes 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 yes Length of stern bush 3'-3"
 Dia. of Tunnel shaft 8.24 Dia. of Crank shaft journals 8.65 Dia. of Crank pin 8 7/8 Size of Crank webs 17x6 1/2 Dia. of thrust shaft under collars 8 7/8 Dia. of screw 11'-10" Pitch of Screw 13'-3" No. of Blades 4 State whether moveable no Total surface 53 ft²
 No. of Feed pumps 2 Diameter of ditto 2 1/2 Stroke 16 1/2 Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 2 1/2 Stroke 16 1/2 Can one be overhauled while the other is at work yes
 No. of Donkey Engines 2 Sizes of Pumps { 7" x 4 1/2" x 6" / 6" x 6" x 9" } No. and size of Suctions connected to both Bilge and Donkey pumps [Blank]
 In Engine Room 3 @ 3" In Holds, &c. 2 @ 3" In Bunker 1 @ 3"
 No. of Bilge Injections 1 sizes 5" Connected to condenser, or to circulating pump pump 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~~ mud boxes 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 yes
 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 Bilge & Ballast How are they protected Wood casing, steel covered
 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
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from [Blank]

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel David Colville & Sons, Ltd.
 Total Heating Surface of Boilers 2570 ft² Is Forced Draft fitted no No. and Description of Boilers 2-18" cylindrical, Return-tube
 Working Pressure 180 lbs. Tested by hydraulic pressure to 320 lbs. Date of test 30-9-24 No. of Certificate 16,622
 Can each boiler be worked separately yes Area of fire grate in each boiler (abt.) 42 ft² No. and Description of Safety Valves to each boiler 2-Bockhorn High lift Area of each valve 3.98 ins² Pressure to which they are adjusted 180 lbs. Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 2 ft. Mean dia. of boilers 12'-1" Length 10'-6" Material of shell plates steel
 Thickness 1" Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D. R. Lap long. seams T. R. D. B. S. Diameter of rivet holes in long. seams 1 1/16 Pitch of rivets 7 5/8 Lap of plates or width of butt straps 1'-4"
 Per centages of strength of longitudinal joint 89.5 Working pressure of shell by rules 181 lbs. Size of manhole in shell 20" x 16"
 Size of compensating ring 5 1/2" x 1" No. and Description of Furnaces in each boiler 2-20" corrugated (height) Material steel Outside diameter 3'-8 1/8"
 Length of plain part top 9 1/16 Thickness of plates bottom 9 1/16 Description of longitudinal joint weld No. of strengthening rings [Blank]
 Working pressure of furnace by the rules 184 lbs. Combustion chamber plates: Material steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 7/8"
 Pitch of stays to ditto: Sides 7 1/2" x 7 7/8" Back 7 1/2" x 9" Top 7 1/2" x 9" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 198 lbs.
 Material of stays steel Area at smallest part 15 1/4 Area supported by each stay 67.5 Working pressure by rules 215 lbs. End plates in steam space: Material steel Thickness 1" Pitch of stays 17" x 17" How are stays secured 2 nuts top washers / one plate Working pressure by rules 182 lbs. Material of stays steel
 Area at smallest part 23 1/4 Area supported by each stay 289 ins² Working pressure by rules 191 lbs. Material of Front plates at bottom steel
 Thickness 13/16 Material of Lower back plate steel Thickness 13/16 Greatest pitch of stays 23" P.C.D. Working pressure of plate by rules 225 lbs.
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 3/8" Material of tube plates steel Thickness: Front 13/16 Back 3/4" Mean pitch of stays 10"
 Pitch across wide water spaces 14 1/4" x 8 3/4" Working pressures by rules 180 lbs. Girders to Chamber tops: Material steel Depth and thickness of girder at centre 2 @ 8 1/4" x 3 3/4" Length as per rule 2'-5 5/8" Distance apart 9" Number and pitch of stays in each 3 @ 7 1/2"
 Working pressure by rules 205 lbs. Steam dome: description of joint to shell none % of strength of joint [Blank]
 Diameter [Blank] Thickness of shell plates [Blank] Material [Blank] Description of longitudinal joint [Blank] Diam. of rivet holes [Blank]
 Pitch of rivets [Blank] Working pressure of shell by rules [Blank] Crown plates [Blank] Thickness [Blank] How stayed [Blank]

SUPERHEATER. Type [Blank] Date of Approval of Plan [Blank] Tested by Hydraulic Pressure to [Blank]
 Date of Test [Blank] Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler [Blank]
 Diameter of Safety Valve [Blank] Pressure to which each is adjusted [Blank] Is Easing Gear fitted [Blank]

If a Report also sent on the Hull of the Ship



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

SPARE GEAR. State the articles supplied:—
 2—Connecting rod top-end bolts + nuts; ✓
 2—Connecting rod bottom-end bolts + nuts; ✓
 2—Main bearing bolts + nuts; ✓
 6—Coupling bolts + nuts; ✓
 1 set—Feed + bilge pump valves + seats; ✓
 A quantity assorted bolts + nuts; ✓
 Iron of various sizes; 1 set—each of H.P. + I.P. piston rings; 1 Propeller etc. ✓

The foregoing is a correct description,

A. & J. INGLIS LIMITED
 William Booth
 Makers. Manufacturer.

Dates of Survey while building { During progress of work in shops -- } 1924. Mar 14-17-21. Apr 1-22. May 6-13-15-21-26-28. June 3-6-17-18. July 11-14-16. Aug 6-7-12-15-26-28.
 { During erection on board vessel -- } Sept 1-4-11-18-22-30. Oct 3-8-9-16-22-29. Nov 3-14. Dec 4-9-11-17-22.
 Total No. of visits 46. Is the approved plan of main boiler forwarded herewith { already sent. } Gls Rpt. 44219.

Dates of Examination of principal parts—Cylinders { 3-10-24 } Slides 9-10-24 Covers 3-10-24 Pistons 3-10-24 Rods 3-10-24
 Connecting rods 3-10-24 Crank shaft 3-11-24 Thrust shaft 22-10-24 Tunnel shafts none Screw shaft 29-10-24 Propeller 9-10-24
 Stern tube 8-10-24 Steam pipes tested { 30-9-24 } Engine and boiler seatings { 14-11-24 } Engines holding down bolts 22-12-24
 Completion of pumping arrangements 5-2-25 Boilers fixed 11-12-24 Engines tried under steam 5-2-25
 Completion of fitting sea connections 14-11-24 Stern tube 29-10-24 Screw shaft and propeller 3-11-24
 Main boiler safety valves adjusted 15-1-25 Thickness of adjusting washers Int boiler—both 3/8" Std boiler P 3/8" 8 25"
 Material of Crank shaft steel Identification Mark on Do. LLOYD'S 464 YD'S 42259 J.D.B. 22-10-24
 Material of Tunnel shafts none Identification Marks on Do. 3-11-24 Material of Screw shafts steel Identification Marks on Do. 3-11-24
 Material of Steam Pipes solid drawn steel Test pressure 540 lbs. 22-10-24
 Is an installation fitted for burning oil fuel No 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 Gls ✓ If so, state name of vessel S.S. "Procris"—Gls. Rpt. 44219.

General Remarks (State quality of workmanship, opinions as to class, &c. These Engines + Boilers have been built under special survey in accordance with the Rules + the approved plans; the material + the workmanship are good; they have been well fitted on board and tried under steam with satisfactory result.

This Machinery is eligible, in our opinion, to be classed in the Register Book with notation: -1-L.M.C. 2 25: CL.

It is submitted that this vessel is eligible for THE RECORD. + LMC. 2 25. CL.

J.W.D. 13/2/25

The amount of Entry Fee ... £ 3 : - :
 Special ... £ 35 : 15/- :
 Donkey Boiler Fee ... £ - : - :
 Travelling Expenses (if any) £ - : - :
 When applied for, 10.2.1925.
 When received, 128/2/25.

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

Committee's Minute GLASGOW 10 FEB 1925
 Assigned + LMC 2,25
 CERTIFICATE WRITTEN



Certificate (if required) to be sent GLASGOW