

REPORT ON MACHINERY.

No. 44375

Received at London Office

11 FEB 1925

Date of writing Report

19

When handed in at Local Office

7.2.10 Port of GLASGOW.

No. in Survey held at

Glasgow

Date, First Survey

14.3.24

Last Survey

5-2-1925

Reg. Book.

5092

88841

on the Steel Screw Steamer "FENDRIS"

(Number of Visits 46)

Gross 1309

Master

Built at

Glasgow

By whom built

A. & J. Inglis Ltd. (N° 689 P.)

When built

1925

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

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 as per rule 9.23 Material of screw shaft steel
Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes: no gland 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 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
liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 3'-3"
Dia. of Tunnel shaft as per rule 8.24 Dia. of Crank shaft journals as per rule 8.65 Dia. of Crank pin 8 7/8" Size of Crank webs 17' 6 1/4" 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 ft.²
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
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 in Engine room always accessible yes Are the sluices on Engine room bulkheads always accessible
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 Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel David Colville & Sons, Ltd.
Total Heating Surface of Boilers 2570 ft.² 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 ft.² No. and Description of Safety Valves to
each boiler 2: Lockdown High Lift Area of each valve 3.98 ins.² 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 rivets 89.5% plate 89.9% 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: 2: 18" cylindrical, Return-tube Material steel Outside diameter 3'-8 1/8"
Length of plain part top Thickness of plates crown 3 1/16" bottom Description of longitudinal joint weld No. of strengthening rings
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 18 1/4" x 1 1/4" Area supported by each stay 67.5 ft.² 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 Nuts & washers Working pressure by rules 182 lbs. Material of stays steel
Area at smallest part 23 1/4" Area supported by each stay 289 ins.² Working pressure by rules 191 lbs. Material of Front plates at bottom steel
Thickness 1 1/16" Material of Lower back plate steel Thickness 1 1/16" 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 1 3/16" 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 3/4" 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
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?

Yes

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

Makers. Manufacturer.

William Booth Secy.

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 4-9-11-15-22.
Total No. of visits 46.

Is the approved plan of main boiler forwarded herewith

Yes Rpt. 44219.

" " " donkey " " " "

none. Procris.

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 22-10-24 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 Port boiler - both 3/8" Std boiler 3/8" 8 25/64"

Material of Crank shaft steel Identification Mark on Do. Lloyd's N° 2258 J.D.B. 3-11-24

Material of Tunnel shafts none Identification Marks on Do. Lloyd's N° 2258 J.D.B. 3-11-24

Material of Steam Pipes solid drawn steel Test pressure 540 lbs. Lloyd's N° 2258 J.D.B. 3-11-24

Is an installation fitted for burning oil fuel No 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. "Procris" - Jlb. 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: - L.M.C. 225: CL.

It is submitted that this vessel is eligible for THE RECORD. + LMC 225. CL

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

Committee's Minute

GLASGOW

10 FEB 1925

Assigned

+ LMC 225

CERTIFICATE WRITTEN



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